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Mortality and causes of death in South Africa: Findings from death notification

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Preface

This statistical release presents information on mortality and causes of death in South Africa for deaths that occurred in 2020 calendar year. Deaths for the years 1999–2019 are also included to show trends in mortality and causes of death, using updated information that includes late registrations. The statistical release is based on deaths collected through the South African civil registration system maintained by the Department of Home Affairs. The information on causes of death is as recorded on death notification forms completed by medical practitioners and other certifying officials.

A handwritten signature in black ink, appearing to read 'R. Maluleke', with a stylized, cursive script.

Mr Risenga Maluleke

Statistician-General

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Abbreviations/acronyms

AIDS	Acquired ImmunoDeficiency Syndrome
ANACoD	Analysing Mortality and Causes of Death
CDC	Centre for Disease Control
CVRS	Civil Registration and Vital Statistics
D4H	Data for Health Bloomberg Philanthropies
DHA	Department of Home Affairs
ECA	Economic Commission for Africa
GBD	Global Burden of Diseases
HIV	Human Immunodeficiency Virus
ICD-10	International Classification of Diseases 10 th Revision
ICD-11	International Classification of Diseases 11 th Revision
MDR-TB	MultiDrug-Resistant Tuberculosis
NCDs	Non-Communicable Diseases
NDP	National Development Plan
Stats SA	Statistics South Africa
TB	Tuberculosis
WHO	World Health Organization
XDR-TB	Extensively Drug-Resistant Tuberculosis

1. Introduction

1.1 Background

Civil Registration and Vital Statistics (CRVS) systems are the cornerstone of effective governance and public health infrastructure in any society. At the heart of these systems lies the crucial collection and analysis of mortality data, providing invaluable insights into population dynamics, health trends, and policy effectiveness, as they serve as essential tools for policymakers, public health officials, researchers, and international organizations alike. Robust CRVS systems and mortality data are indispensable for fostering sustainable development, improving health outcomes, and ensuring the well-being of populations worldwide particularly in the current era characterised by global health challenges and rapidly evolving demographics

The outbreak of the coronavirus disease (COVID-19) in Wuhan, in mainland China, and its subsequent spread to all other continents during November 2019 had a significant impact on statistical operations worldwide, including disruption of routine activities and operations of civil registration and vital statistics systems (Fu and Schweinfest 2020; UNSD 2020). Research conducted by the United Nations Economic Commission for Africa (UNECA) and the Centre of Excellence found that countries with digitized notification and registration systems experienced fewer disruptions, ensuring continuous recording of vital events during the state of national emergency.

Historically, communicable diseases have been significant contributors to mortality in South Africa, however, non-communicable diseases (NCDs) have emerged as a growing concern for South Africa's public health as there has been an increase in the proportion of deaths due to non-communicable diseases. In 2019 the leading causes of death due to NCDs in South Africa were diabetes mellitus, cerebrovascular diseases, hypertensive diseases, ischaemic heart diseases, other forms of heart disease, chronic lower respiratory diseases and malignant neoplasms of digestive organs, all of which were conditions that could increase the risk of severe outcomes if an individual contracted COVID-19 (WHO, 2020). Understanding these dynamics is essential for informed decision-making, resource allocation, and the development of targeted interventions to address the broader implications on public health and societal well-being.

1.2 Objectives of this statistical release

The mortality and causes of death statistical release is part of a regular series published by Stats SA, based on data collected through the civil registration system. This statistical release has two main objectives:

- To outline emerging trends spanning a 21-year period (1999–2020) and differentials in mortality by selected socio-demographic and geographic characteristics for deaths that occurred in 2020; and
- To present statistics on the causes of death for deaths that occurred in 2020, focusing on the underlying causes of death.

1.3 Scope of this statistical release

This release is based on mortality and causes of death information from the South African civil registration system. All death notification forms from Department of Home Affairs (DHA) for deaths that occurred in 2020 or earlier that reached Stats SA during the 2023/2024 processing phase are covered. The main focus is on deaths that occurred in 2020. Deaths that occurred during the period 1999 to 2019 are also provided to show trends in mortality and causes of death. 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 composed of five sections. In this release, deaths for the years 1999 to 2020 are included to show patterns in mortality over the years. The first section consists of information on the background and purpose of the release. Section two lays out the data and methods. This includes a focus on data sources, including methods used in data processing, data editing, quality assurance and data analysis. The third section on registered deaths presents mortality levels, trends and differentials, specifically focusing on the socio-demographic and geographic characteristics of the deceased.

The fourth section mainly covers information on the underlying causes of death for 2020 death occurrences (including a special analysis on COVID-19 deaths). In addition, the section provides information on immediate, contributing, and underlying causes of death differentials by natural versus non-natural causes, as well as the Global Burden of Disease (GBD). Finally, the last section presents a summary of the findings and concluding remarks.

2. Data and methods

This section describes the sources of data, methods used to process, edit and analyse data as well as procedures used in assessing the quality of data.

2.1 Data source

The statistics presented in this release are based solely on administrative records from death notification forms obtained from the Department of Home Affairs (DHA). The DHA uses two types of death notification forms to capture deaths: Form BI-1663 which was introduced in 1998 and Form DHA-1663 which was introduced in 2009 as a replacement of Form BI-1663. However, BI-1663 forms will continue to be used until all remaining forms in circulation are depleted. The major difference between the two forms is that stillbirths and deaths occurring within the first seven days of life (perinatal deaths) on Form BI-1663 are recorded in the same section as all other deaths.

Form DHA-1663 has a separate section that records perinatal deaths. In instances where there is no medical practitioner available to complete the death notification form as is the case in some rural areas in South Africa, a traditional leader may complete and issue a Death Report form also known as Form B1-1680 which certifies the occurrence of death and a description of circumstances that resulted in the death. During registration at DHA offices, information on the Death Report is transcribed on to either the BI-1663 or the DHA-1663.

The Births and Deaths Registration Amendment Act, 2010 (Act No. 18 of 2010) is the legislation governing the registration of deaths in South Africa (Republic of South Africa, 1992; Republic of South Africa, 2010). Additionally, the 2014 Births and Deaths Regulations which rescinded the 1992 Regulations prescribe that notice of occurrence of death including a stillbirth must be given within 72 hours by an informant, regardless of the citizenship status of the deceased. After registration of the death, the DHA issues a death certificate to the informant and updates the National Population Register (NPR). The NPR only includes deaths for South African citizens with ID documents and permanent residents whose birth records were already captured onto the NPR prior to death. South African citizens and permanent residents who died before notice of their births had been registered would also not be captured in the NPR.

Persons not eligible for inclusion in the NPR are non-South African citizens who were temporarily in the country. Stats SA, on the other-hand, collects all death notification forms, irrespective of the deceased's citizenship status for processing, analysis and dissemination of mortality and causes of death information. On this basis, the number of deaths processed by Stats SA will always be higher than the number of deaths recorded on the NPR for the same period.

2.2 Data processing

The processing of completed death notification forms takes place at the Stats SA Data Processing Centre. The process begins with sorting of the forms by year of death, pasting unique identifier labels on each of the forms, coding sociodemographic and causes of death variables, and ending with data capturing. Data from the two death notifications (Form BI-1663 and Form DHA-1663) are then merged into one dataset as data elements in these two forms are largely comparable.

2.2.1 Classification of the causes of death

The cause-of-death statistics in this publication are compiled using the International Classification of Diseases (ICD), 10th Revision, 2016 Edition. The ICD is a system of categories to which morbid entities of either external or pathological causation are assigned according to established criteria. It is developed collaboratively between the World Health Organization (WHO) and various international centres. It is revised from time to time in line with new adaptations, classifications and glossaries. All member states of the United Nations, including South Africa, agreed to use ICD as the standard classification system for compiling morbidity and mortality statistics. The South African National Information System also adopted it as a standard (WHO, 2016).

The primary purpose of ICD-10 is to provide for conversion of word descriptions of diseases or conditions into an alphanumeric code, which permit easy storage, retrieval and analysis of data. It also allows for the systematic and standardised recording, analysis, interpretation, comparison and sharing of morbidity and mortality data within a population and across countries. The ICD-10 provides for coding and classification of diseases and injuries and a wide range of signs, symptoms and other abnormal findings.

Each chapter contains three-character categories, which is subdivided into 10 four-character subcategories. However, for international comparisons, three-character coding is the mandatory level for reporting morbidity and mortality statistics, while four-character coding is recommended for more specific details about the disease or condition resulting in morbidity or mortality. Stats SA codes the causes-of-death data at four-character level where sufficient details about the causes of death were available. However, this statistical release analyses up to three-character level.

At the World Health Assembly, which was held in Geneva on 25 May 2019, ICD-11 was adopted for implementation. For the first time, ICD is fully electronic, currently providing access to 17 000 diagnostic categories, with over 100 000 medical diagnostic index terms. WHO has encouraged all Member States to use the most current version of the ICD for reporting death and disease statistics by migrating from ICD-10 to the new ICD-11. This is important because it provides a common language for recording, reporting, and monitoring diseases and allows the world to compare and share data in a consistent and standard way. To assist countries with the transition process, WHO has developed a guideline that countries need to consider in the lead up to and during the transition from an existing ICD environment to the eventual implementation of ICD-11. (ICD-11 Implementation or Transition Guide, Geneva: World Health Organization; 2019)

To initiate the process to transition, Stats SA requested assistance from the Centre for Disease Control and Prevention, Atlanta (CDC Atlanta) with support from Data for Health Bloomberg Philanthropies (D4H). The initial step was the development of the transition plan followed by ICD-11 training which was a training-of-trainers course (TOT). Participants included Stats SA Mortality and Causes of Deaths senior coders, programmers from data processing and analysts. It is envisaged that Stats SA will

transition from ICD-10 to ICD-11 over a period of two processing years. As a means of ensuring stability of the Mortality and Causes of Deaths (MACOD) product, during the transition period, the organisation will still be publishing MACOD data using ICD-10, while the impact of transitioning on quality and consistency of data is being assessed.

The quality of the causes of mortality statistics depends on completeness and accuracy of certified death notification forms. Coders at Stats SA follow the principle of, 'what you see is what you code' when coding causes-of-death statistics. The coders use the ICD-10 for categories of causes of death coded in the ICD-10 manual. For categories that are not coded in the ICD-10 manual, Stats SA has outlined specific guidelines and procedures. For example, according to these rules and procedures immunosuppression is coded as immunodeficiency and not as human immunodeficiency virus (HIV) disease.

Medical practitioners sometimes report the cause of death as acquired immune suppression which is not coded in the ICD-10 manual. Based on the Stats SA guidelines, this is coded as human immunodeficiency virus (HIV) disease (B20-B24). Multidrug-resistant tuberculosis (MDR-TB) and extensively drug-resistant tuberculosis (XDR-TB) were assigned the ICD-10 special codes U51 and U52, respectively, and are included in the tuberculosis (A15-A19) broad group causes of mortality.

2.2.2 Generation of the underlying causes of death

The underlying cause of death is defined 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, 2016: 31). Stats SA uses IRIS software for the automated derivation of the underlying causes of death according to the ICD-10 rules. In occasions where the software fails to derive the underlying cause of death, experienced coders at Stats SA derived the underlying cause of death manually.

2.3 Data editing

On completion of all data processing, an internally developed Stats SA editing program was used to check for accuracy and flag implausible causes of death for further investigation. Additionally, two electronic tools developed by WHO: Analysing mortality levels and causes-of-death (ANACoD) version 2.0 and CoDEdit version 1.0 were used to further check data consistency and plausibility (WHO, 2014a and WHO, 2014b, respectively). The tools were developed to enhance the value of mortality statistics in informing health policies and programmes. The main difference between the two tools is that CoDEdit assesses data consistency and plausibility for each unit record, while ANACoD checks the data at an aggregate level.

ANACoD version 2.0 and CoDEdit version 1.0 tools were used to automatically check the 2020 mortality data for accuracy and consistency. The tools were also used for highlighting cases with causes unlikely to cause death categorised by age and sex (sex-specific causes, age-specific causes and notifiable diseases). They also assist with assessment with possible misuse of ICD-10 codes as well as providing a summary of records within the dataset (WHO, 2014a; WHO, 2014b). For instance, regarding causes of death that are specific to one sex, the tools warn and flag for errors where the combination of sex and cause is incorrect. Errors flagged by the tools, were manually investigated for verification and corrections where necessary.

2.4 Assessment of the quality of data

The importance of producing quality mortality statistics derived from the civil registration system cannot be over-emphasised, since they are the only source of health information data continuously available at national and local administrative levels.

Mortality data have the potential to support decentralised population health administration, while the usability of statistics derived from such data depends wholly on their quality (WHO, 2013). An accurate, complete and timely civil registration system provides the foundation for the production of reliable and routine vital statistics. However, the data can suffer from a range of quality limitations such as late registrations, completeness of death registration, timeliness of data dissemination, accuracy of reporting, high proportion of ill-defined causes of death and misreporting or misclassification of causes of death. It is therefore important to assess data quality and to be transparent about data limitations, to identify areas of improvement.

For the purpose of this statistical release in addition to the quality assessment undertaken through ANACoD and CoDEdit electronic tools, the framework proposed by Mahapatra et al. (2007) was used to evaluate quality of the 2020 causes of death data. This section presents a summary of the results of this assessment. A detailed discussion of the assessment is provided in Appendix C.

In the 2015 statistical release (Stats SA, 2018), an estimated 96,0% completeness level of adult deaths (15 years and older) was reported for the 2011–2016 intercensal/survey period. Male adults had a completeness level of 97,0%, higher than the adult female completeness level of 95,0%.

Estimates for the 2020 deaths completeness level remain the same, and a revised estimate will be provided once Census 2022 data is available.

2.5 Data analysis

A two-pronged data analysis approach was followed for this release, which includes mortality analysis and causes of death analysis. The first section on mortality describes information on selected socio-demographic variables and mortality patterns, based on frequency distributions and cross-tabulations.

The section further covers demographic indicators such as sex ratios at death, age-specific death rates and median ages at death for the reported deaths. Sex ratios at death show the ratio of male deaths per 100 female deaths and age-specific death rates show variations in mortality taking into consideration the population size of each age group. Median ages show how early or late mortality occurs in the population and specifies the age at which half of the reported deaths occur.

The second section lays out analysis of information on causes of death, mainly based on ranking the natural underlying causes of death and proportions of deaths due to specific causes. The top-ranking causes determine the leading causes of death. The ranking indicates the frequency of causes of death among those causes eligible to be ranked, and does not reflect causes of death in terms of their importance from a public health perspective. Causes of death with the same number of deaths received the same rank, and a rank was skipped for the next cause. For example, if two causes of death had the same frequency and were ranked third, they both received the same rank, and the next cause received rank five.

The process of ranking natural underlying causes of death excluded symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99), because such information is not sufficiently detailed to be of use for public health purposes. It is therefore essential to raise awareness among certifying practitioners to seek sufficient evidence to assign causes of these deaths to the more precise categories through training programmes and other initiatives.

Due to concerns about violence and deaths due to accidents in South Africa, natural and non-natural causes have been separated. Although non-natural causes of death were not ranked, for analysis they were disaggregated by characteristics such as age, sex and province of death of the deceased, which relay important information on the levels and patterns of non-natural deaths. Due to the emergence of the COVID-19 pandemic, additional analysis on the subject is presented in the cause of death section.

In addition, the second section also provides information on causes of death based on the Global Burden of Disease as generated by ANACoD. Causes of deaths are categorised into three broad groups, namely Group I (communicable diseases), Group II (non-communicable diseases) and Group III (injuries). Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99) deaths which are ill-defined natural causes of death were accorded across communicable and non-communicable diseases categories. The release also presents tables on mortality and causes of death for district municipalities in the country in the appendices section. Information on local

municipalities is not provided in this release, but it can be made available in an aggregated dataset format and not as unit records datasets to users on request.

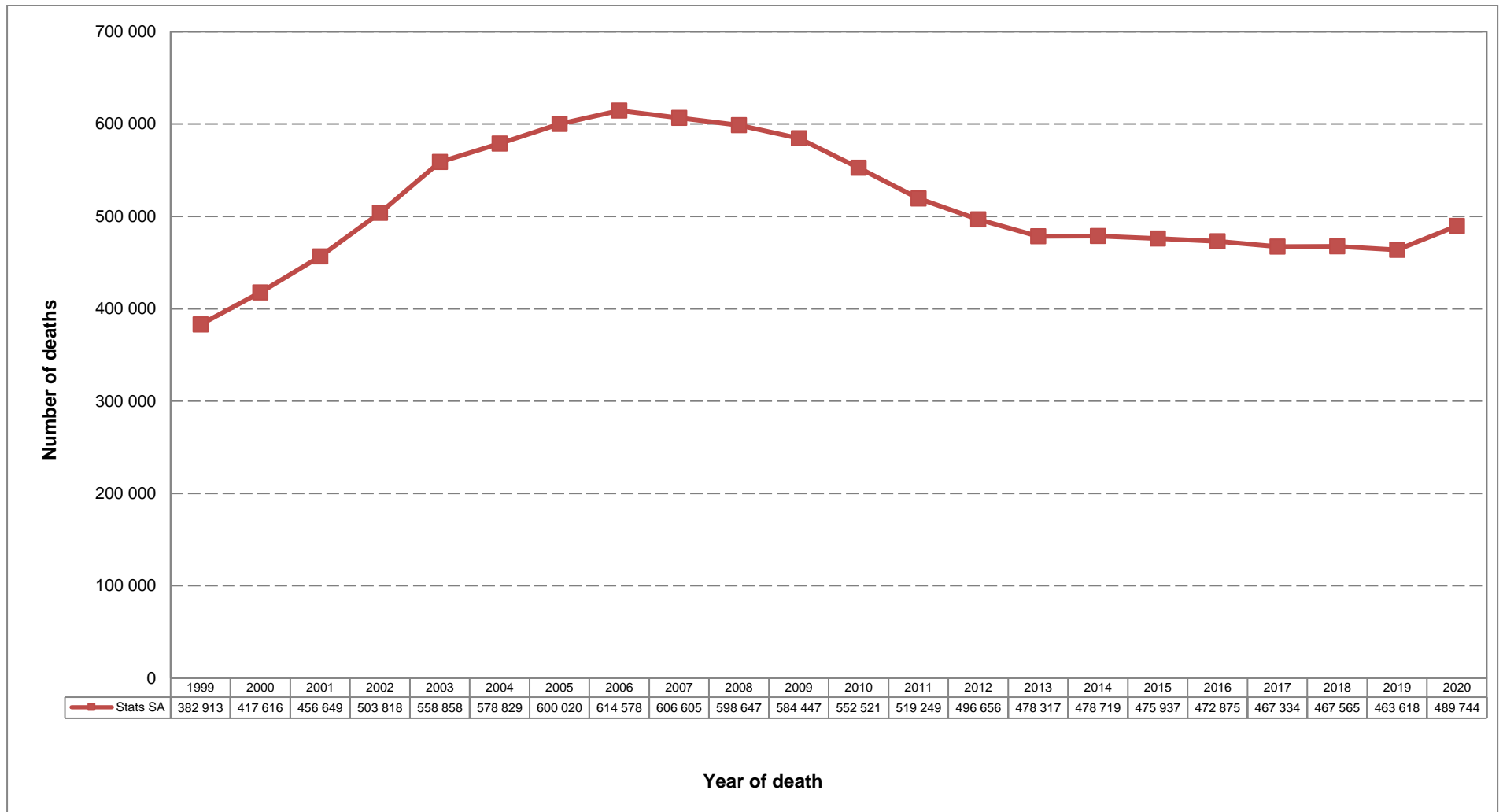
3. Mortality

This chapter provides analysis on the distribution of 2020 registered deaths that reached Statistics South Africa (Stats SA) during the 2023/2024 processing phase. The section mainly focuses on absolute numbers and percentage distributions of 2020 deaths by selected background characteristics of the deceased such as age, sex, place/institution of death and geographic information (province and district municipalities). Levels and trends of registered deaths over the period 1999–2020 are also included.

3.1 Levels and trends of mortality in 2020

Figure 3.1 shows that the total number of deaths that occurred and were registered in 2020 at DHA and processed by Stats SA during 2023/2024 were 489 744. This indicates a 5,3% increase from the 463 618 deaths recorded for 2019.

The general trend in the number of registered deaths processed by Stats SA indicates an increase from 1999 to 2006 when the number of deaths peaked at 614 578 in 2006, and decreased thereafter, except for the year 2020. The overall number of deaths per year increases as additional forms are processed at Stats SA. Additional forms may result from delayed registration or delayed transmission of forms from DHA regional offices to head office in time for processing at Stats SA. It is, therefore, expected that additional forms, 2020 forms in particular as well as forms for the previous years, will still be received for processing at Stats SA. Updated information will be provided in the next statistical release.

Figure 3.1: Number of registered deaths by year of death, 1999–2020*

*Data for 1999–2019 have been updated with late registrations / delayed death notification forms processed in 2023/2024.

3.2 Age differentials

The distribution of deaths by age group is presented in Table 3.1. The highest number of deaths that occurred in 2020 was among individuals aged 65–69, comprising 9,3% of all deaths. This age group was followed by age groups 60–64 and 70–74; each respectively comprising 9,2% and 8,7% of all deaths. Deaths that occurred among infants (age zero) accounted for 4,1% of all deaths, while the lowest percentages of deaths were observed in age groups 5–9 and 10–14, each representing 0,5% and 0,6%, respectively.

Table 3.1: Number and percentage distribution of deaths by age group, 2020

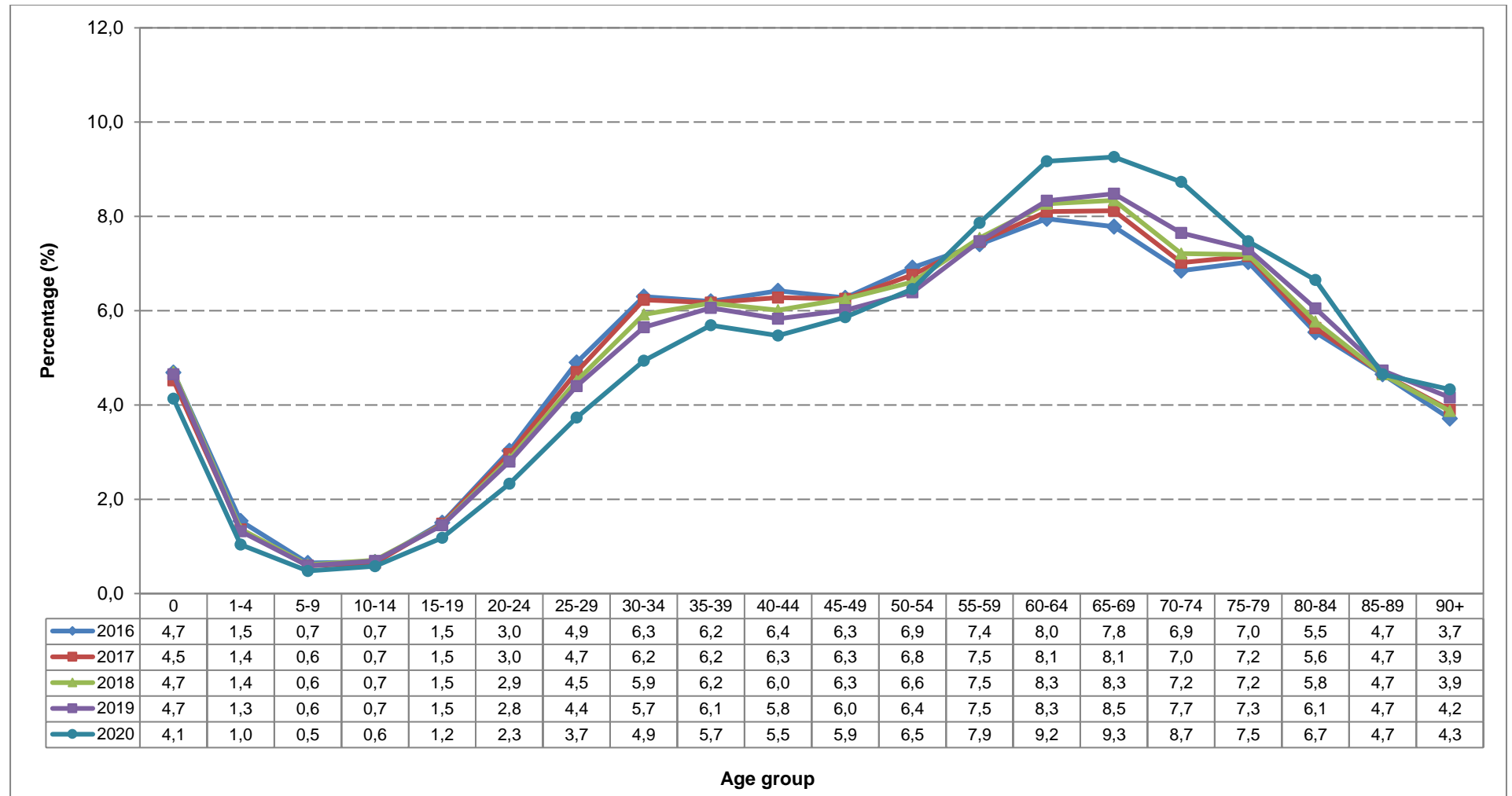
Age group	Number	Percentage (%)
0	20 221	4,1
1–4	5 071	1,0
5–9	2 346	0,5
10–14	2 834	0,6
15–19	5 763	1,2
20–24	11 388	2,3
25–29	18 289	3,7
30–34	24 184	4,9
35–39	27 880	5,7
40–44	26 784	5,5
45–49	28 701	5,9
50–54	31 647	6,5
55–59	38 518	7,9
60–64	44 901	9,2
65–69	45 326	9,3
70–74	42 758	8,7
75–79	36 591	7,5
80–84	32 560	6,6
85–89	22 759	4,6
90+	21 223	4,3
Total	489 744	100,0

Figure 3.2 shows the percentage distribution of deaths by age group and year of death between 2016 and 2020. A general observation is that the age pattern of mortality was somewhat consistent over the five-year period. The pattern is generally characterised by high proportions of deaths among infants (age zero), lower proportions for ages 1–4, lowest proportions between 5–9 years and 10–14 years, rising but still low proportions between age group 15–19 and 20–24. High proportions averaging over 7,0% are observed from age groups 55–59 to 75–79.

The figure further shows that in 2020 age group 65–69 recorded the highest proportion of deaths at 9,3%, followed by the age group 60–64 at 9,2%. The lowest proportions throughout the years were observed are within age group 5–9, with 2020 recording the lowest in the five years at 0,5%. Moreover, in 2020, the percentage distribution of deaths for individuals in age groups zero to 45–49 were generally

lower than the previous four years. Additionally, while deaths in the age groups 55 to 74 have been the highest over a number of years, in 2020 the proportion of deaths in these age groups rose to levels which had not been seen in recent years. The age groups 60–64 to 70–74 each recorded approximately 1,0% more deaths than the previous years. Notably, the percentage distribution of deaths for age group 85–89 has remained the same from 2016 to 2020 at 4,7%.

Figure 3.2: Percentage distribution of deaths by age group and year of death, 2016–2020*



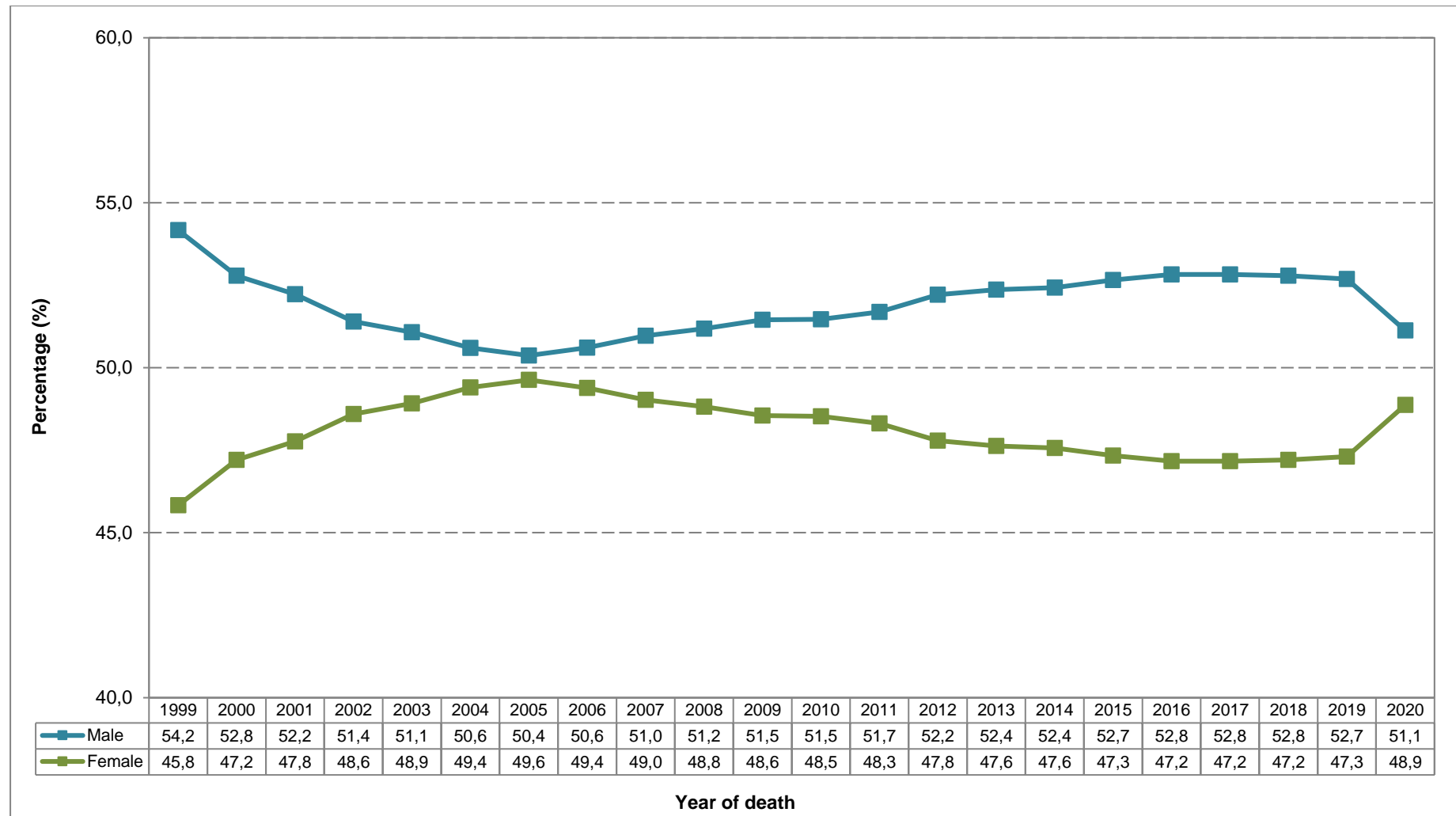
*Excluding deaths with unspecified age.

Data for 2016–2019 have been updated with late registrations / delayed death notification forms processed in 2023/2024.

3.3 Sex differentials

Figure 3.3 presents the percentage distribution of deaths by sex and year of death from 1999–2020. The results show that prior to 2006, the proportion of male deaths persistently decreased while that of females increased, and the reverse was observed from 2006 to 2016 for both sexes. The percentage of male deaths declined consistently from a high of 54,2% in 1999 to a low of 50,4% in 2005. The opposite was true for females where their contribution to total deaths increased from a low of 45,8% in 1999 and reached a peak of 49,6% in 2005. The proportion of female deaths decreased yearly from 49,4% in 2006 to 47,2% in 2016. Conversely, during the same period, the percentages of male deaths increased from 50,6% to 52,8%.

Notably, between 2016 and 2018, the percentage distribution of deaths remained the same between the two sexes, with males accounting for 52,8% of deaths and females for 47,2%. From 2019, a change in pattern was observed as male deaths decreased to 52,7% in 2019 and further to 51,1% in 2020, and female deaths increased to 47,3% and 48,9% for those years.

Figure 3.3: Percentage distributions of deaths by sex and year of death, 1999–2020*

*Excluding deaths with unspecified sex.

Data for 1999–2019 have been updated with late registrations / delayed death notification forms processed in 2023/2024.

The annual percentage changes in the number of deaths by sex from 1999–2020 are shown in Appendix E. Appendix F provides Age-specific Death Rates (ASDRs) for the years 2016 to 2020 in order to show differentials in mortality by age group, taking into account the population size of each age group. The ASDRs provided should be interpreted with caution as they are based on the observed number of deaths that have not been adjusted for incomplete death registration, which may vary by age group.

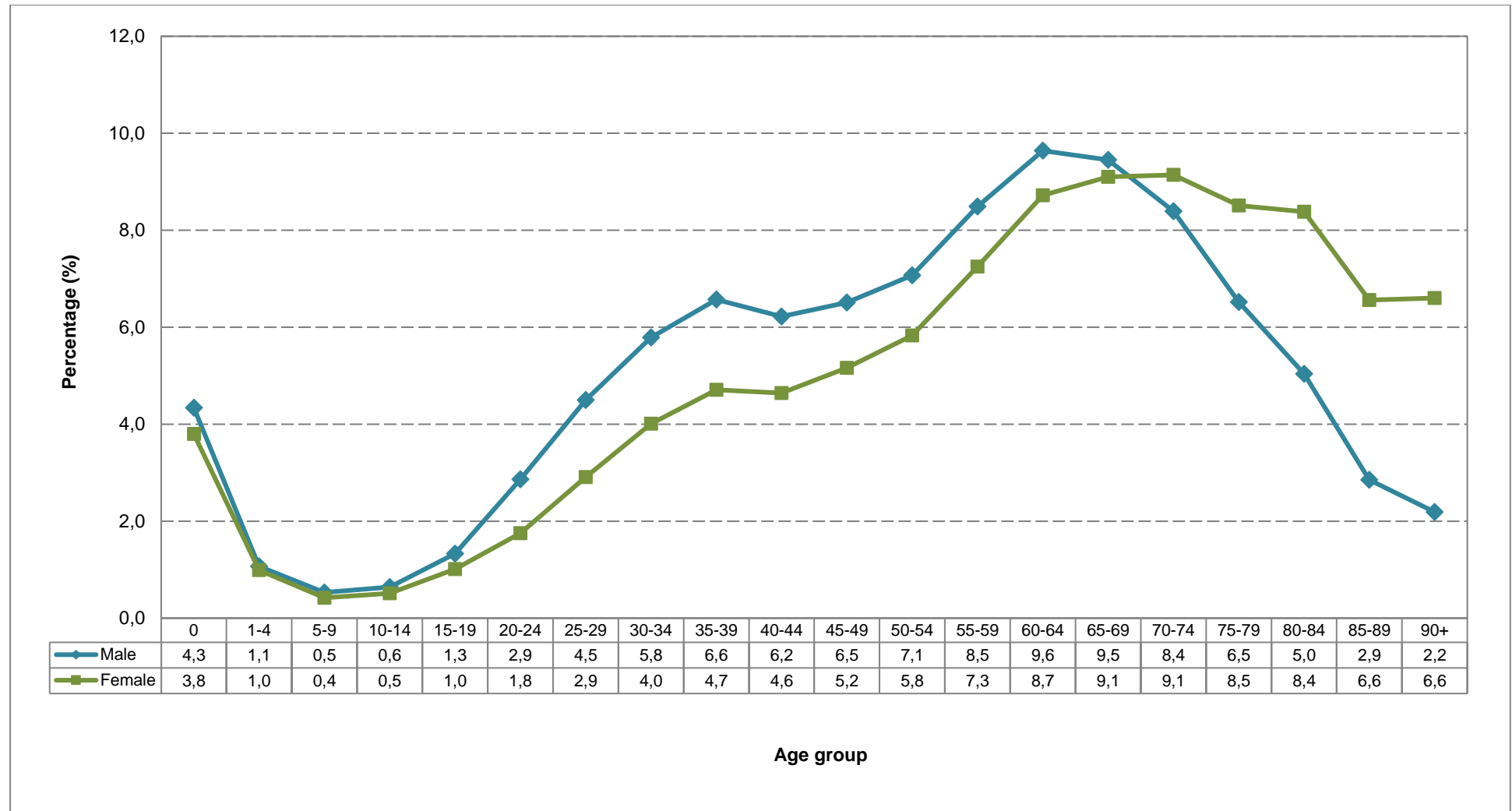
3.4 Age and sex differentials

3.4.1 Distribution of deaths by age group and sex

Figure 3.4 shows the age and sex percentage distribution of deaths for 2020 (absolute numbers are presented in Appendix D). The differences between proportions of male and female deaths were minimal at younger ages (age groups 1–4 to 15–19 years). The distribution shows that the percentage of male infant deaths marginally exceeded the percentage of female infant deaths (4,3% for males and 3,8% for females). For both males and females, the lowest proportions of deaths occurred among those aged 5–9 (0,5% for males and 0,4% for females).

Male deaths peaked at the age group 60–64 (9,6%), followed by age group 65–69 (9,5%) and age group 55–59 (8,5%). The highest proportions for females were observed at age groups 65–69 and 70–74 with 9,1%, followed by age group 60–64 accounting for 8,7% of total female deaths. Overall, from age 70 and older, there were more female than male deaths. The gap in the proportion of male and female deaths was highest in the age group 90 and older, followed by age group 85–89.

Figure 3.4: Percentage distribution of deaths by age group and sex, 2020*



*Excluding deaths with unspecified sex.

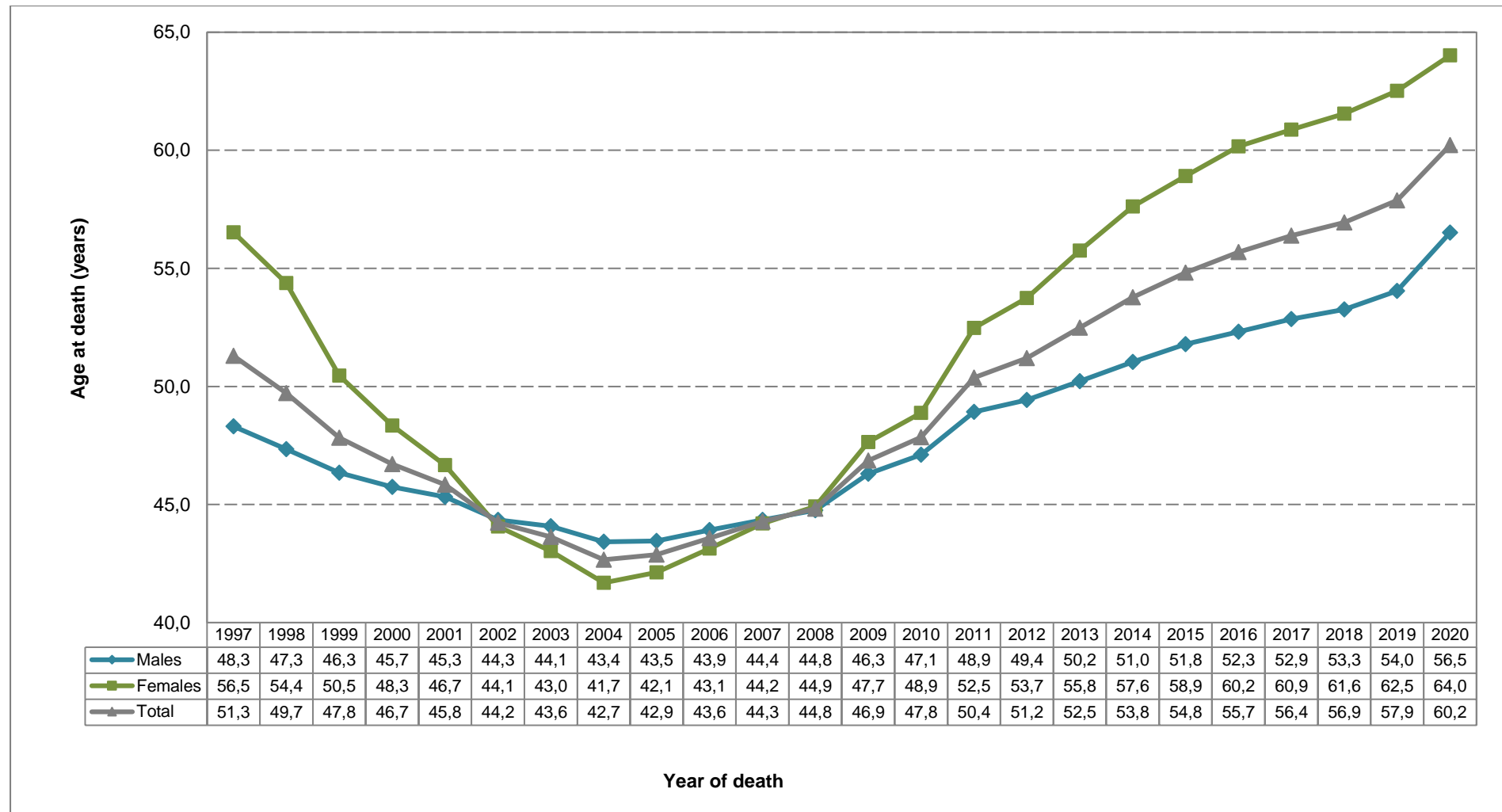
3.4.2 Median ages at death by sex

The median ages at death by sex are presented in Figure 3.5. Median ages show how early or late mortality occurs in the population and specifies the age at which half of the reported deaths occur. An analysis of median ages can reveal changes in patterns of mortality over time; lower median ages at death indicate that mortality is occurring earlier while higher median ages indicate that mortality is occurring later.

Figure 3.5 shows that the median ages at death for total deaths declined notably from 47,8 years in 1999 and reached their lowest level of 42,7 years in 2004. The decreases were more rapid for females compared to males. The median age at death for females decreased by 8,8 years from 50,5 years in 1999 to 41,7 years in 2004, while the median age at death for males decreased by 2,9 years from 46,3 years in 1999 to 43,4 years in 2004.

Since 2005, the median ages at death for both males and females have been increasing, reflecting improvement in mortality. The median age at death for all deaths increased from 42,7 in 2004 to 60,2 in 2020. Female median age at death had the sharpest increase from 41,7 in 2004 to 64,0 in 2020, with the median age at death for males increasing from 43,4 to 56,5 in the respective years.

Figure 3.5: Median ages at death by sex and year of death, 1999–2020*



*Data for 1999–2019 have been updated with late registrations / delayed death notification forms processed in 2023/2024.

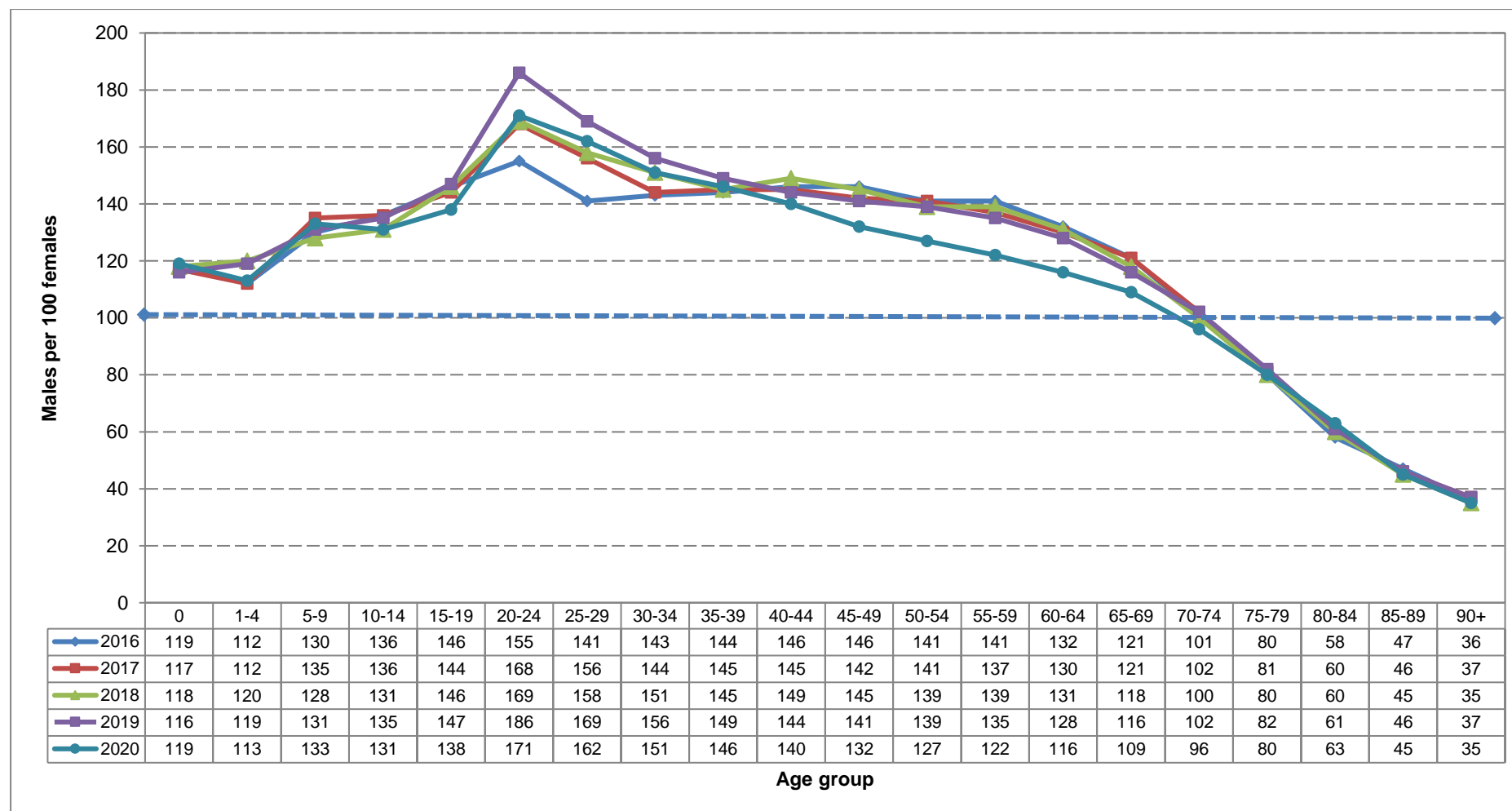
3.4.3 Sex ratios by age groups

The sex ratio at death is an important demographic indicator, highlighting the number of male deaths relative to the number of female deaths. When there are equal numbers of male and female deaths, the sex ratio at death is equal to 100. If there are more males than female deaths, the sex ratio is above 100 and excess female deaths are indicated by a sex ratio at death that is less than 100.

Figure 3.6 represents the sex ratio at death by age groups and year of death for the period 2016–2020. Over the five-year period, more male than female deaths were consistently observed from age zero up to age group 65–69. Generally, there were more female deaths among those aged 75 and older. However, a shift in the trend was noted in 2020 with a ratio for the age group 70–74 being below 100.

The results also indicate that the highest sex ratio (186 male deaths per 100 female deaths) was observed in 2019 in the age group 20–24 years. This age group persistently remains the age group with the highest sex ratio of male to female deaths, increasing from 155 to 186 in 2016 to 2019 and decreasing to 171 in 2020.

Figure 3.6: Sex ratios by age group and year of death, 2016–2020*



*Excluding deaths with unspecified age and sex.

Data for 2016–2019 have been updated to include late registrations/death notification forms processed in 2023/2024.

3.5 Population group differences in mortality

Mortality differentials by population group reflect the stage of health transition. Black Africans and coloureds are faced with the quadruple burden of disease, while profiles for Indians/Asians and whites are dominated by non-communicable diseases. The effect of HIV/AIDS and tuberculosis has been greatest in black Africans, exacerbating mortality differentials. The discussion and distribution of underlying causes of death by population group are provided in Appendices Q and Q1.

Table 3.2 shows the absolute and percentage distribution of deaths by population group for 2020. To account for the population composition, the table also shows deaths per thousand population. The population group with the highest proportion of deaths was black Africans who accounted for 66,3% of all deaths. The Other population group and the Indian/Asian population group accounted for the least percentage of deaths with 0,2% and 2,4% of all registered deaths, respectively. The table also indicates that 9,4% and 7,5% of all deaths were for the white and coloured population groups, respectively. Just above 14,0% of the cases had unknown or unspecified population groups. The proportion of unknown/unspecified population groups was above 14,3%, in 2020, the highest proportion observed in recent years. While there has been an improvement in other aspects of reporting on the death notification forms, the proportion of deaths with unknown or unspecified population groups remains considerably high and therefore, these results should be interpreted with caution.

The percentage of deaths within the entire population indicates that the black African population group has a higher proportion of deaths. However, a look into the death rate within each population group, as seen in the deaths per thousand population column, reveals a different picture. The death rate is higher among the white population group at 9,8%, followed by the Indian/Asian population groups (7,6%) and the coloured population group (7,0%). Among the black African population group, the death rate was 6,7%.

Table 3. 2: Number and percentage distribution of deaths by population group, 2020

Population group	Number of deaths	Percentage of deaths (%)	Population group size	Deaths per thousand population
Black African	324 451	66,3	48 153 727	6,7
White	46 064	9,4	4 679 770	9,8
Indian/Asian	11 641	2,4	1 541 113	7,6
Coloured	36 802	7,5	5 247 740	7,0
Other	914	0,2	*	*
Unknown or unspecified	69 872	14,3	*	*
Total	489 744	100,0	59 622 350	

*Other and unknown/unspecified population groups are not reported in 2020 mid-year population estimates

3.6 Marital status differences in mortality

The informant reporting a death has to indicate the marital status of the deceased at the time of death. Table 3.3 shows the number and percentage distribution of deaths by marital status of the deceased. About 34,6% of the deceased were reported as never married at the time of death. Nearly a quarter (24,1%) of the deaths were for individuals that were married. Furthermore, 11,0% and 2,2% of all deaths occurred among widowed and divorced persons, respectively. The marital status of the deceased at the time of death was missing in 28,1% of all registered deaths and, therefore, these results must be interpreted with caution.

Table 3.3: Number and percentage distribution of deaths by marital status, 2020

Marital status	Number	Percentage (%)
Never married	169 528	34,6
Married	118 005	24,1
Widowed	54 018	11,0
Divorced	10 649	2,2
Unknown/unspecified/not applicable	137 544	28,1
Total	489 744	100,0

3.7 Differences in mortality by smoking status of the deceased

The number and percentage distribution of registered deaths from the year 2020 as classified by smoking status of the deceased is depicted in Table 3.4. Smoking status of the deceased is defined as the regular smoking of tobacco during the five years prior to death, and the question is applicable if the deceased was aged 16 and older.

The table shows that the highest percentage of deaths were among people who were non-smokers (41,0%) while 16,5% of the deaths occurred among people who were smokers. The table also shows that 36,4% of registered deaths in 2020 had smoking status classified as unknown or unspecified. The high proportion of deaths with missing information on smoking status shows a poor reporting of this information on the death notification forms, therefore these results must be interpreted with caution.

Table 3.4: Number and percentage distribution of deaths by smoking status among those aged 16 and older, 2020

Smoking status	Number	Percentage (%)
Yes	75 457	16,5
No	187 885	41,0
Do not know	28 225	6,2
Unknown or unspecified	166 830	36,4
Total	458 397	100,0

3.8 Differences in mortality by place or institution of death occurrence

Table 3.5 shows the number and percentage distribution of registered deaths by place or institution of death occurrence for 2020. The results indicate that 37,9% of the deaths took place in hospitals, 2,1% were emergency room or outpatient facility deaths and 1,8% died in nursing homes. These three places of death occurrence accounted for 41,8% of total deaths that occurred within a healthcare facility. A total of 127 492 deaths (26,0%) occurred at home in 2020, while 11 681 deaths (2,4%) were of people who had already died by the time they reached the hospital (dead on arrival). Of the 489 744 death notification forms processed for the year 2020, 28,4% had unknown or unspecified information on place or institution of death of the deceased.

Table 3.5: Number and percentage distribution of deaths by place of death occurrence, 2020

Place of death	Number	Percentage (%)
Hospital	185 566	37,9
Emergency room / Out patient	10 334	2,1
Dead on arrival	11 681	2,4
Nursing home	8 777	1,8
Home	127 492	26,0
Other	6 536	1,3
Unknown / unspecified	139 358	28,4
Total	489 744	100,0

3.9 Geographic variations in mortality

This section presents information on the distribution of registered deaths by province and district municipality where the death occurred, and by the deceased's usual residences. The district and province information was derived based on the 2016 municipal boundaries. The number and percentage distribution of deaths by province of the deceased are provided in Appendix I (absolute numbers and percentages, respectively); Appendix J presents the sex distribution of these.

3.9.1 Differences by province, age and sex

Table 3.6 shows the distribution of 2020 deaths by province of death occurrence and province of usual residence of the deceased at the time of death. The province of death occurrence may not always be similar to the place of usual residence.

For the province of death occurrence, the highest proportion of deaths (22,2%) occurred in Gauteng, followed by KwaZulu-Natal and Eastern Cape each comprising 19,3% and 15,9%, respectively. The lowest percentage of deaths occurred in the Northern Cape (3,1%).

With regard to the province of usual residence, Gauteng (21,7%) had the highest proportion of deaths, followed by KwaZulu-Natal (19,0%) and Eastern Cape (15,1%).

A cross-tabulation of province of death occurrence and province of usual residence of the deceased is given in Appendix H and H1. It must be noted that analysis on geographic distribution of deaths is based

only on place of death occurrence, not place of residence or place of birth of the deceased. However, information on the distribution of deaths by place of residence and place of birth of the deceased 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, 2020

Province	Province of death occurrence		Province of usual residence of deceased	
	Number	Percentage (%)	Number	Percentage (%)
Western Cape	55 644	11,4	55 488	11,3
Eastern Cape	78 041	15,9	74 017	15,1
Northern Cape	14 962	3,1	14 001	2,9
Free State	31 801	6,5	31 284	6,4
Kwa-Zulu Natal	94 582	19,3	93 187	19,0
North West	30 545	6,2	32 868	6,7
Gauteng	108 931	22,2	106 082	21,7
Mpumalanga	29 865	6,1	31 706	6,5
Limpopo	44 415	9,1	51 111	10,4
Outside South Africa	206	0,0		
Unspecified	752	0,2		
Total	489 744	100,0	489 744	100,0

The number distribution of deaths by age and province of death occurrence as shown in Appendix I indicates that Gauteng had the highest number of deaths for all age groups (age 0 [5 526], 1–14 years [2 111], 15–44 years [25 925], 45–64 years [31 779] and 65 years and older [43 590]). It must be noted that the distribution of deaths does not take into account potential under-reporting of deaths at specific ages, which may vary by district of death occurrence.

Percentage variations in 2020 deaths by age and district municipality are presented in Appendix I1. At province level, North West (6,2%) had the highest proportion of infant deaths. Limpopo (3,1%) had the highest percentage of deaths among children 1–14 years. Deaths in Mpumalanga (26,3%), followed by KwaZulu-Natal (25,0%) had the highest percentage in the 15–44 age category. Northern Cape had the highest proportion of deaths occurring in the 45–64 age group (32,7%), with the least percentage of deaths under this age group observed in Limpopo at 26,0%. Western Cape had the highest percentage of elderly deaths [ages 65 and older (44,1%)], followed by Eastern Cape (43,4%) and Limpopo (43,3%).

3.9.2 Differences by district municipality, age group and sex

The distribution of deaths by age and district municipality of death occurrence as shown in Appendix I indicates that out of the 52 district municipalities, the top three district municipalities were metropolitan municipalities: City of Johannesburg (33 491), City of Cape Town (32 611) and eThekweni (29 393). The district municipalities that recorded the least number of deaths were Central Karoo (184), Xhariep (876) and Namakwa (1 521). Differentials by age group indicate that the City of Johannesburg had the highest number of deaths for age 0 (1 921) as well as 1–14 years (625) and among those aged 15–44 (8 494). Lastly, the City of Cape Town had the highest number of deaths for age groups 45–64 (9 782) and 65 years and older (14 569). The percentage variations by age and district municipality are shown in Appendix I1.

Appendix J shows the sex distribution of the deceased by the district municipality of death occurrence. The four metropolitan municipalities, the City of Cape Town, the City of Johannesburg, eThekweni and the City of Tshwane, had a high prevalence (over 10 000) of death for males and females. It is also observed that eighteen district municipalities had sex ratios below 100, which means there were more female deaths than male deaths. These district municipalities were in Free State, Limpopo, Eastern Cape and Kwa-Zulu Natal provinces.

4. Causes of death

This section presents information on causes of death for all registered deaths that occurred in 2020, as well as some comparisons with data for the previous years. The section has nine sub-sections, namely: introduction, reported causes of death, method of ascertaining the cause of death, main groups of the underlying causes of death, natural and non-natural causes of death, major group of causes of death, broad groups of natural causes of death, non-natural causes of death, and comparisons between immediate, contributing and underlying causes of death.

The 10th revision of the International Classification of Diseases (ICD-10) was used to classify the causes of death data in this publication. The analysis undertaken focuses mainly on the underlying cause of death, which is defined as the disease or injury that initiated the train of events leading directly to death; or the circumstances of the accident or violence which produced the fatal injury (WHO, 1992). Previous publications have shown that Non-Communicable Diseases (NCD) pose a major barrier to health, quadrupling the burden of disease and as such, this necessitated the inclusion of analysis on the Global Burden of Diseases. Global Burden of Diseases is a critical resource for informed policymaking, as it provides a tool to quantify and compare the effects of different diseases in a population.

Trend analysis for the period 1999–2020 is also done to establish patterns between natural and non-natural causes of death. A summary of causes of death by age, sex and province of occurrence is also included in this section.

The final subsection provides a comparison between underlying, immediate and contributing causes of death. This analysis gives an overview of the recorded instances of multiple causes of death, as death notification forms allow for reporting one or more causes of death on each form.

4.1 Reported causes of death

The BI-1663 and DHA-1663 forms make provision for the recording of multiple causes of death. These are Part 1 and Part 2 under “Medical Certificate of Cause of Death” on both death notification forms, or under “Causes of Death” for perinatal deaths on the new form (DHA-1663). Part 1 is for reporting a chain of events leading directly to death, with the immediate cause of death on line (a) and the underlying cause on the lowest used line. Part 2 is for reporting other conditions that contributed to death but did not cause any of the causes of death mentioned in Part 1. These are other important diseases or conditions that were present at the time of death and may have contributed to, but did not lead to the underlying cause of death listed in Part 1.

Table 4.1 provides information on the number of causes of death reported on each death notification form for deaths that occurred in 2020. It is observed that less than one per cent (0,5%) of the forms had no cause of death indicated on the forms. There are two possible circumstances under which no cause of death is indicated on the form. Firstly, in instances where a doctor has ticked on the form to show that the death was a natural cause but did not provide a specific cause. Secondly, where a death was

still under investigation when the form was completed and causes of death had not yet been established, or the page with causes of death information was missing.

All these causes were subsequently coded to other ill-defined and unspecified causes of mortality (R99) or other conditions originating in the perinatal period (P96), depending on the age of the deceased. If the deceased was aged 28 days or younger, the cause of death was finally reported as other conditions originating in the perinatal period (P96), while for ages greater than 28 days it was reported as other ill-defined and unspecified causes of mortality (R99).

More than half of the death notifications (51,6%) had one cause recorded, followed by 25,1% of death notification forms which had two causes of death recorded and 20,6% which had three causes recorded.

Table 4.1: Number and percentage distribution of death notification forms by the number of causes entered on the notification form, 2020

Number of the reported causes of death	Number of death notification forms	Percentage (%)
No cause	2 471	0,5
One cause	252 589	51,6
Two causes	123 014	25,1
Three causes	100 634	20,6
Four or more causes	11 036	2,3
Total	489 744	100,0

4.2 Method of ascertaining cause of death

The death notification form makes provision for a certifying official to indicate the method that was used to ascertain the cause of death. Table 4.2 shows the nine options available on the form for method used to ascertain the death.

With the exclusion of unspecified method of ascertainment, the opinion of the attending medical practitioner at 25,3% was the most common method of ascertaining causes of death. It was followed by the opinion of the attending medical practitioner on duty at 14,6% and interview of family member at 12,6%. Autopsy was performed in 8,8% of the deaths. There were 1,7% of forms that indicated that cause of death was ascertained through post mortem examination.

Table 4.2: Number and percentage distribution of deaths by method used to ascertain the cause of death, 2020

Method of ascertaining the cause of death	Number	Percentage (%)
Autopsy	42 912	8,8
Post mortem examination	8 479	1,7
Opinion of attending medical practitioner	123 899	25,3
Opinion of attending medical practitioner on duty	71 472	14,6
Opinion of registered professional nurse	4 943	1,0
Interview of family member	61 757	12,6
Other	4 527	0,9
Autopsy results may be available later*	14	0,0
Autopsy not performed	758	0,2
Unknown	1 191	0,2
Unspecified	169 792	34,7
Total deaths	489 744	100,0

*For perinatal deaths only

4.3 Main groups of the underlying causes of death

This section presents an overview of the underlying causes of death for main groups (chapters) of classification of causes of death. The ICD-10 classifies diseases and related health problems into 22 chapters, of which 19 are used in the reporting of information on underlying causes of death (see Table 4.3).

The chapters in the ICD excluded in this report are chapters 19, 21 and 22. These are discussed briefly below:

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.

Stats SA adopted to include COVID-19 as part of the 22 chapters for the ease of analysis as well as aligning with other countries who have adopted similar approach. This is because the 2016 version of ICD-10 did not have COVID-19 as a chapter on the underlying causes of death.

Table 4.3 shows both the number and percentage distribution of deaths by the 19 main groups (chapters) of the classification of causes of death. The most common main group of causes of death in 2020 was *diseases of the circulatory system*, comprising 18,0% of all deaths. The second most common main group of causes of death was *symptoms and signs not elsewhere classified*, accounting for 16,5% of deaths. This main group consists mainly of information about various symptoms and signs that may not fit into other categories; for example, some common conditions under this group include abnormal heart sounds (R01) and abnormal blood chemistry (R79).

The third most reported main group of causes of death was *certain infectious and parasitic diseases*, accounting for almost 13,5% of deaths. The rest of the groups contributed less than 10,0% of deaths in 2020. Among these were *external causes of morbidity and mortality* (9,6%), *diseases of the respiratory system* (8,8%) and *neoplasms* (8,3%).

Table 4.3: Distribution of deaths by main causes of death, 2020

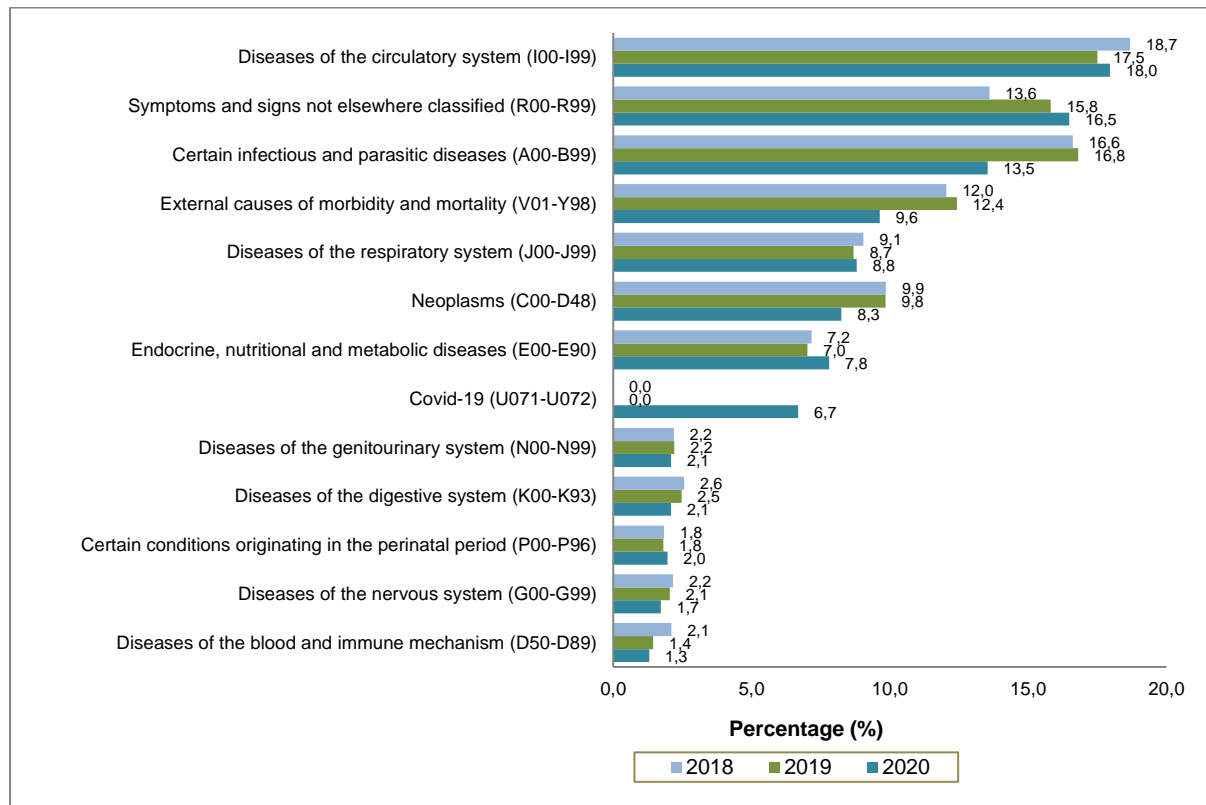
No.	Main groups of underlying causes of death (based on ICD-10)	Number	Percentage
9	Diseases of the circulatory system (I00-I99)	87 970	18,0
18	Symptoms and signs not elsewhere classified (R00-R99)	80 782	16,5
1	Certain infectious and parasitic diseases (A00-B99)*	66 243	13,5
20	External causes of morbidity and mortality (V01-Y98)	47 186	9,6
10	Diseases of the respiratory system (J00-J99)	43 098	8,8
2	Neoplasms (C00-D48)	40 396	8,3
4	Endocrine, nutritional and metabolic diseases (E00-E90)	38 231	7,8
	Covid-19 (U071-U072)	32 757	6,7
14	Diseases of the genitourinary system (N00-N99)	10 233	2,1
11	Diseases of the digestive system (K00-K93)	10 217	2,1
16	Certain conditions originating in the perinatal period (P00-P96)	9 602	2,0
6	Diseases of the nervous system (G00-G99)	8 426	1,7
3	Diseases of the blood and immune mechanism (D50-D89)	6 367	1,3
5	Mental and behavioural disorders (F00-F99)	2 882	0,6
17	Congenital malformations (Q00-Q99)	2 055	0,4
13	Diseases of the musculoskeletal system etc. (M00-M99)	1 678	0,3
12	Diseases of the skin and subcutaneous tissue (L00-L99)	1 013	0,2
15	Pregnancy, childbirth and puerperium (O00-O99)	565	0,1
8	Diseases of the ear and mastoid process (H60-H95)	28	0,0
7	Diseases of the eye and adnexa (H00-H59)	15	0,0
	Total	489 744	100,0

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

A three-year (2018–2020) trend analysis on the distribution of deaths by selected main groups of causes of death was undertaken and the results are shown in Figure 4.1. It is observed that the rankings of the main groups of causes of death by year have remained more or less the same during the period 2018–2020. *Diseases of the circulatory system* were the most common causes of death for the three years and accounted for between 17,5% and 18,7% of deaths across the three years. It was also the main group that accounted for the biggest percentage increase from the previous two years. *Certain infectious and parasitic diseases* were the third most common group of underlying causes in 2020 (13,5%) down from 16,8% in 2019.

A slight and gradual decline in the reference years was observed for four main groups namely: *neoplasms, diseases of the digestive system, diseases of the nervous system and diseases of the blood and immune mechanisms*. Five main groups that contributed the least to the causes of death for the observed years, all under 3,0% throughout, are *diseases of the digestive system, certain conditions originating in the perinatal period, diseases of the genitourinary system, diseases of the nervous system and diseases of the blood and immune mechanisms*.

Figure 4.1: Percentage distribution of deaths by main groups of causes of death, 2018–2020*



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

Data for 2018–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024.

4.4 Natural and non-natural causes of death

The ICD-10 codebook classifies all causes of death from chapters 1 to 18 of the ICD-10 as natural causes and chapter 20 (V01-Y98) as non-natural causes. This section discusses both natural and non-natural causes of death. Non-natural causes of death comprise all deaths that were not attributable, or may not have been attributable to natural causes. Natural and non-natural causes of death information reported in this release was derived from the underlying causes of death based on specific causes of death recorded on the death notification form.

Table 4.4 shows that since 1999, the number of deaths due to natural causes were higher than the number of deaths due to non-natural causes. Between 1999 and 2006, there was a consistent increase in the number of natural deaths, after which a decline was observed until 2019 and increased again in 2020. Further, it can be observed that there was an inconsistent pattern in the number of deaths due to non-natural causes. However, the number of deaths due to non-natural causes has increased consistently between 2011 and 2019 and decreased in 2020.

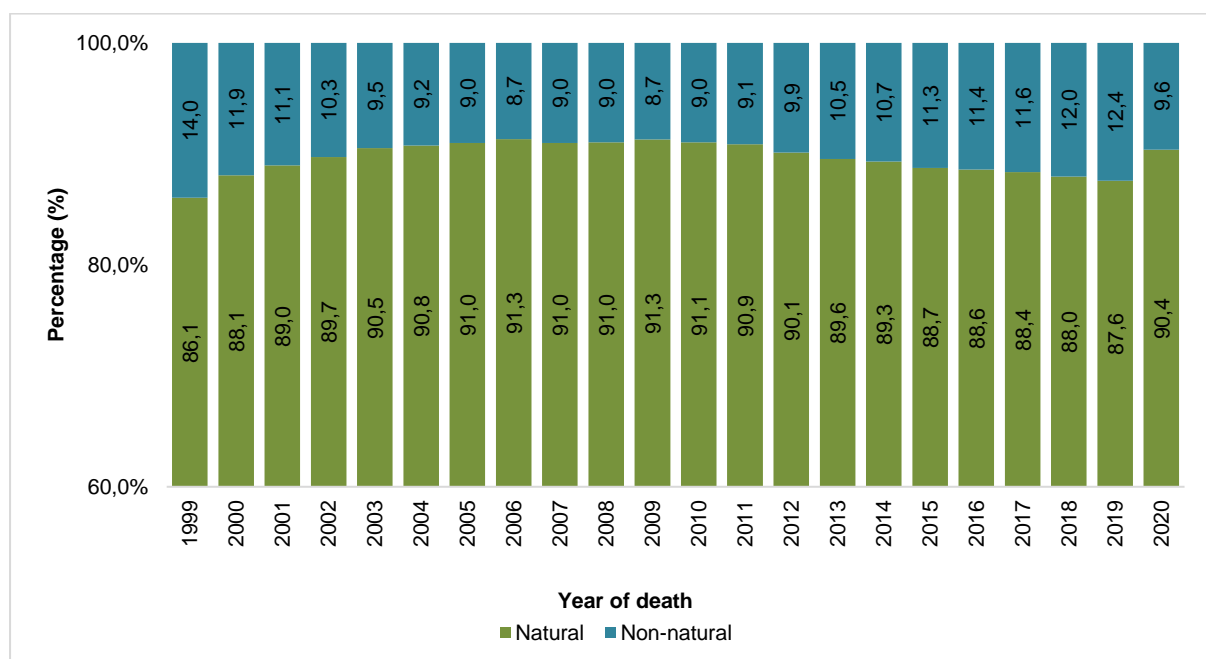
Table 4.4: Number of natural and non-natural deaths by year of death occurrence, 1999–2020*

Year of death	Number of natural deaths	Number of non-natural deaths	Total
1999	329 504	53 409	382 913
2000	367 758	49 858	417 616
2001	406 202	50 447	456 649
2002	452 006	51 812	503 818
2003	505 881	52 977	558 858
2004	525 360	53 469	578 829
2005	545 939	54 081	600 020
2006	561 257	53 321	614 578
2007	551 941	54 664	606 605
2008	544 938	53 709	598 647
2009	533 553	50 894	584 447
2010	503 095	49 426	552 521
2011	471 815	47 434	519 249
2012	447 581	49 075	496 656
2013	428 353	49 964	478 317
2014	427 553	51 166	478 719
2015	422 366	53 571	475 937
2016	418 943	53 932	472 875
2017	412 915	54 419	467 334
2018	411 281	56 284	467 565
2019	406 014	57 604	463 618
2020	442 558	47 186	489 744

*Data for 1999–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024.

Percentage distributions of natural and non-natural causes of death by year of death for the period 1999 to 2020 are shown in Figure 4.2. The pattern shows that the percentage of deaths due to natural causes was consistently above 85,0% each year. For non-natural causes of death, the pattern shows decreases in the proportion of deaths from 1999 to 2006. In 2007, the proportion of deaths due to non-natural causes increased to 9,0% and remained at this level in 2008, then declined to 8,7% in 2009. From 2010 to 2019, deaths due to non-natural causes increased steadily, although the levels were still lower than those observed in 1999 (14,0%). In 2020, deaths due to non-natural causes decreased to 9,6%.

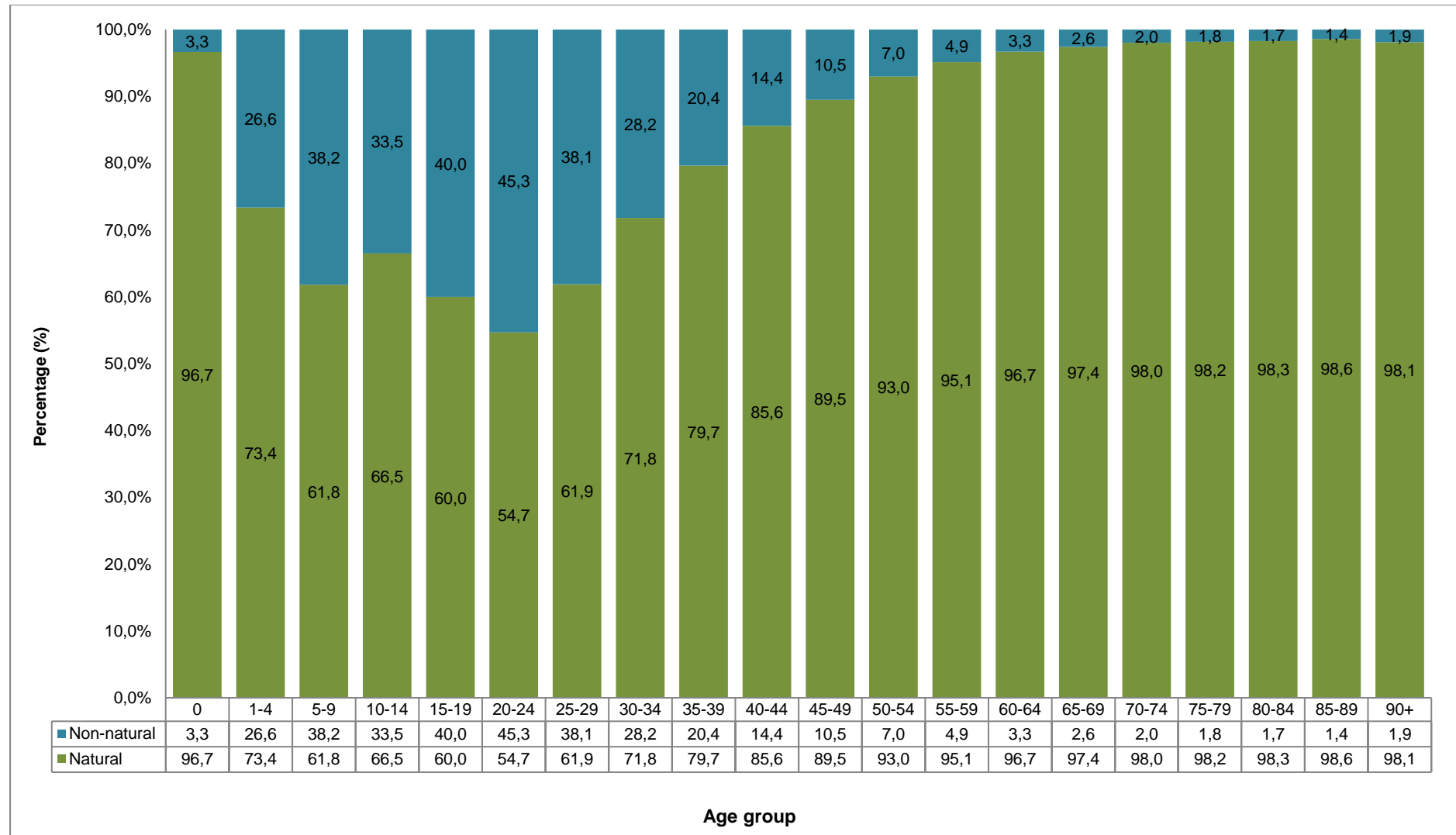
Figure 4.2: Percentage distribution of natural and non-natural causes of death by year of death, 1999–2020*



*Data for 1999–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024.

4.4.1 Natural and non-natural causes of death by age

The percentage distribution of deaths due to natural and non-natural causes classified by age group for deaths that occurred in 2020 is provided in Figure 4.3. The general pattern observed that the proportion of deaths due to non-natural causes increases consistently from age 0 (3,3%) to age group 20–24 (45,3%), with the exception of age group 10–14 (33,5%), and decreased thereafter. Figure 4.3 also shows that the age group 20–24 (45,3%) was the age mostly affected by non-natural causes. Other ages with higher proportions (over 30,0%) of deaths due to non-natural causes were age groups 5–9 (38,2%), 10–14 (33,5%), 15–19 (40,0%), 20–24 (45,3%) and 25–29 (38,1%). Ages least affected by non-natural deaths were infancy (less than 0) and older ages (55 years and older) where less than 5,0% of the deaths in each of these age groups were due to non-natural causes of death. Over 90% of deaths occurring amongst individuals aged 50 and above, as well as age 0, were due to natural causes.

Figure 4.3: Percentage distribution of natural and non-natural causes of death by age, 2020

4.5 Major groups of causes of death as per Global Burden of Disease

The Global Burden of Disease (GBD) Study is an all-inclusive program of disease burden that assesses mortality and disability from major diseases, injuries, and risk factors. It provides a comprehensive picture of mortality and disability across countries, time, age, and sex and is a landmark initiative that systematically quantifies the prevalence, morbidity, and mortality for hundreds of diseases, injuries, and risk factors of global health importance. This is a useful measure as countries can combine this type of evidence along with information about policies and their costs to decide how to set their health targets and interventions. GBD also makes comparisons across populations, enabling understanding of the changing health challenges facing people across the world.

The nineteen ICD-10 chapters used in the reporting of information on underlying causes of death can be further condensed into three groups of causes of death as per the Global Burden of Disease cause list:

Group I:

- communicable diseases (e.g., *tuberculosis, pneumonia, diarrhoea, malaria, measles*);
- maternal and perinatal causes (e.g., *maternal haemorrhage, birth trauma*); and
- nutritional conditions (e.g., *protein-energy malnutrition*).

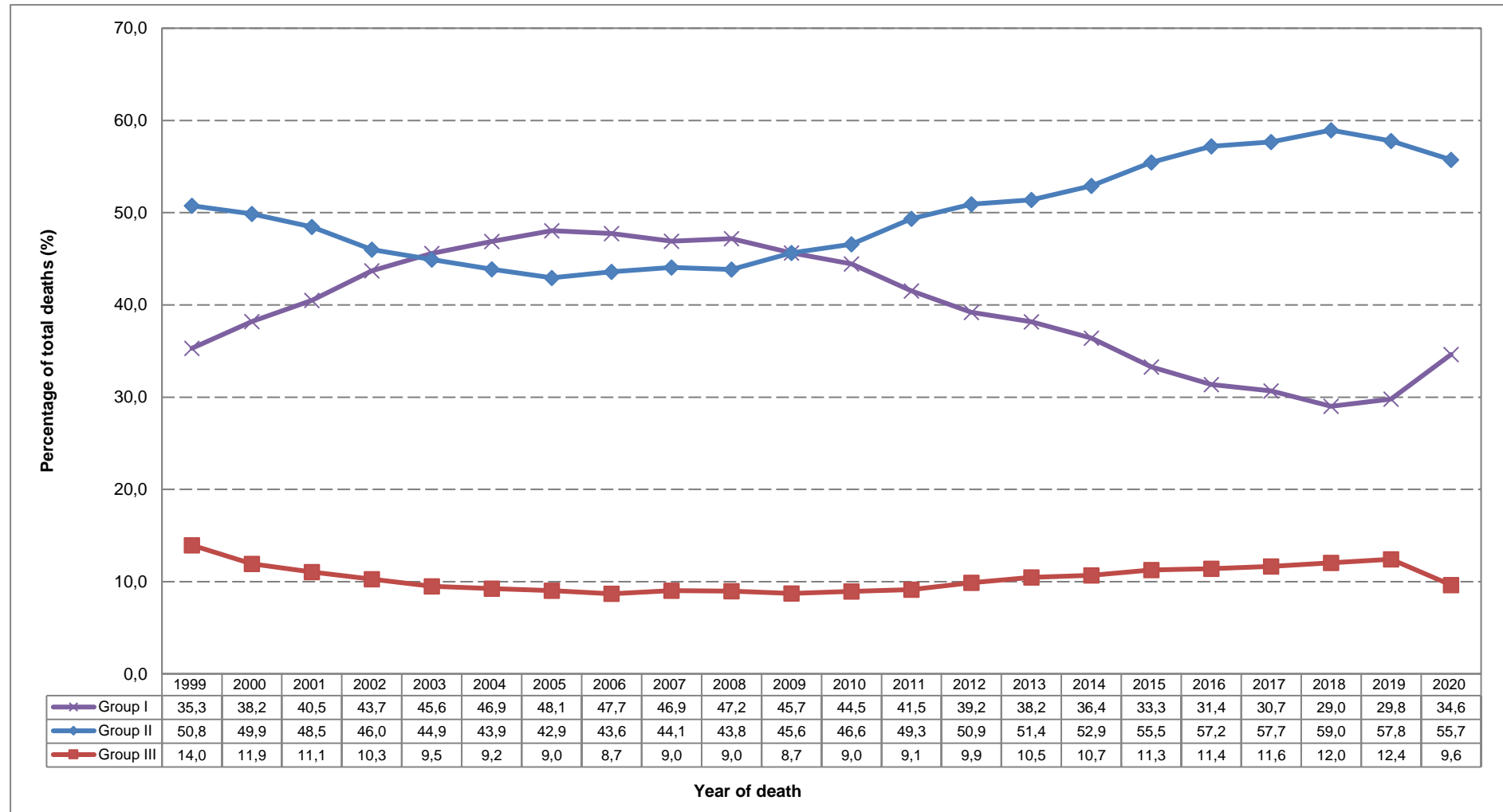
Group II: non-communicable diseases (e.g., *cancer, diabetes, heart disease and asthma*)

Group III: external causes of mortality (e.g., *accidents, homicide and suicide*)

Communicable diseases are diseases caused by pathogenic micro-organisms, such as bacteria, viruses, parasites or fungi and can be spread, directly or indirectly, from one person to another. These include, among other diseases, diarrhoea, tuberculosis and pneumonia. Non-communicable diseases are medical conditions or diseases that are non-infectious or non-transmissible among people. These diseases last for longer periods and progress slowly and include, among others, cancer, asthma and heart diseases. External causes of mortality are the non-natural causes of death which are discussed in Chapter 20 of the ICD-10.

The percentage distribution of deaths by group type and year of death are depicted in Figure 4.4. The pattern shows that before 2003, there were more deaths from non-communicable diseases relative to communicable diseases, although the gap narrowed over time. Starting from the year 2003 up to 2008, deaths due to communicable diseases surpassed non-communicable deaths. In 2009, there was an equal proportion of deaths due to communicable and non-communicable diseases. From 2010 to 2018, the gap between communicable and non-communicable diseases became wider with more deaths resulting from non-communicable diseases. The recent pattern (2019–2020) indicates a narrowing gap between communicable and non-communicable diseases.

Figure 4.4: Percentage of deaths due to communicable diseases (Group I), non-communicable diseases (Group II) and injuries (Group III) by year of death, 1999–2020*



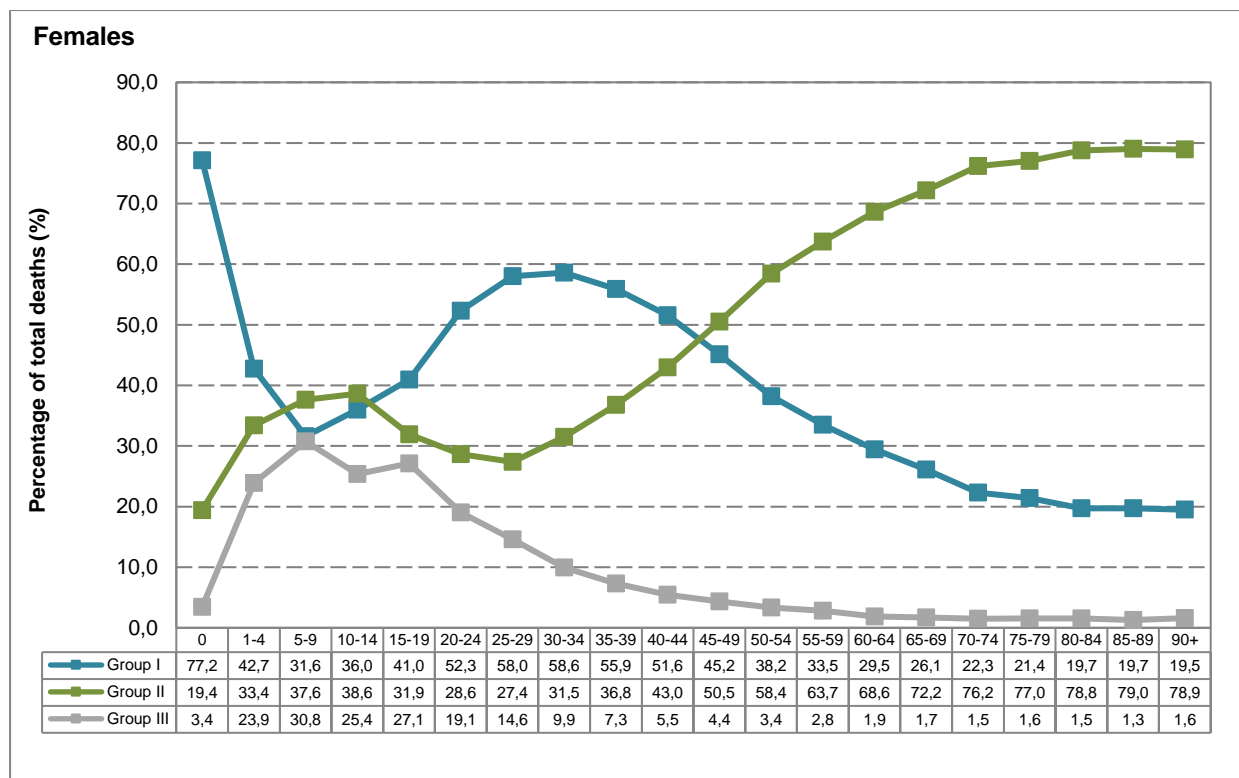
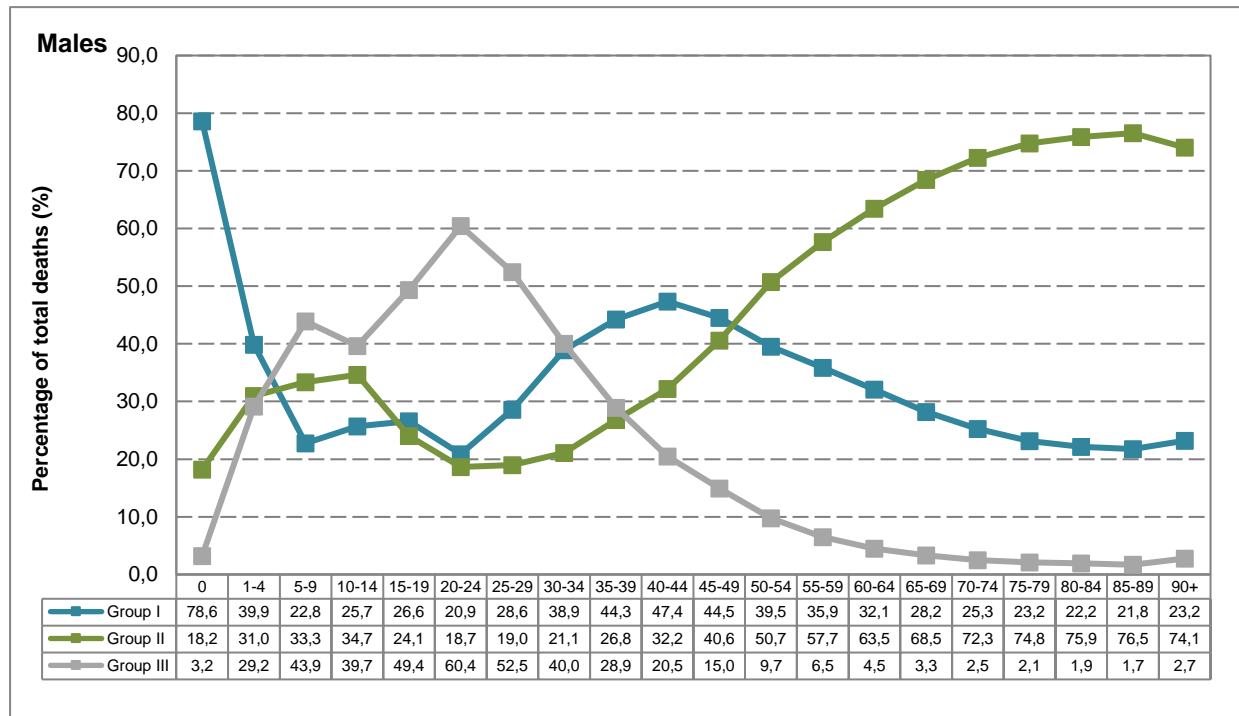
*Data for 1999–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024.

Figure 4.5 shows the percentage distribution of causes of death by sex, group type and age group. For both sexes, the proportion of deaths due to communicable disease was high among children aged 0 years. Deaths due to communicable diseases peak again at ages 40–44 (47,4%) for males while it peaks again at ages 30–34 (58,6%) for females. The proportion of deaths due to communicable diseases declines gradually with age from the age of 45 for males and from the age of 35 for females.

Deaths due to non-communicable diseases for females are lowest among children aged zero (19,4%), 25–29 (27,4%) and 20–24 (28,6%). While for males, deaths due to non-communicable diseases are lowest at the ages zero (18,2%), 20–24 (18,7%) and 25–29 (19,0%). Deaths due to non-communicable diseases for other age groups among females accounted for more than 30,0% of deaths. From the age of 25 for males and 30 for females, deaths due to non-communicable diseases continue to increase with age.

The proportion of deaths due to external causes of death was higher for males compared to females at all ages above age 1. For males, the proportion of deaths due to this group was particularly high at ages 20–24 where at least 60,4% of deaths due to external causes exceeded deaths due to other causes. The proportion of deaths due to injuries decreased steadily with age from the age of 25 for males, and from the age of 20 for females.

Figure 4.5: Percentage of deaths due to communicable diseases (Group I), non-communicable diseases (Group II) and injuries (Group III) by sex and age group, 2020*



4.6 Broad groups of natural causes of death

Information on the leading underlying natural causes of death for broad groups is presented in this subsection. The ten leading causes were identified by ranking the causes of death by the number of deaths among those eligible for ranking as described in Section 2 and excludes symptoms, signs and abnormal findings, not elsewhere classified as well as all non-natural deaths (external causes of morbidity and mortality). The top-ranking causes determine the leading underlying natural causes of death as it accounts for large numbers of deaths within a specified population and time period.

4.6.1 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 2018–2020. The years 2018 and 2019 have been included to show recent trends in natural causes of death. The table provides changes in the ten leading underlying causes of death by absolute numbers and percentages over the three-year period.

Table 4.5 shows that eight of the ten leading causes of death in 2020 were the same for the three-year period, although they differed in rank as well as proportions. The *COVID-19* pandemic first reached South Africa in 2020 and became the leading cause of death. *Diabetes mellitus* came in second as leading underlying causes of death. The most notable change in rank was for *tuberculosis*, which moved from being ranked first in 2018 (accounting for 6,1% of deaths), second in 2019 (5,5%) to seventh in 2020 (accounting for 4,0% of deaths).

For a list 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 2020, refer to Appendix K. The breakdown of individual causes for the broad groups that were among the ten leading causes in 2020 is provided in Appendix L.

Table 4.5: The ten leading underlying natural causes of death, 2018–2020*

Causes of death (based on ICD-10)	2018			2019			2020		
	Rank	Number	%	Rank	Number	%	Rank	Number	%
Covid-19 (U071-U072)		1	32 757	6,7
Diabetes mellitus (E10-E14)	2	27 383	5,9	1	26 315	5,7	2	32 100	6,6
Cerebrovascular diseases (I60-I69)	3	23 509	5,0	3	23 247	5,0	3	27 066	5,5
Hypertensive diseases (I10-I15)	6	20 985	4,5	5	20 602	4,4	4	24 847	5,1
Influenza and pneumonia (J09-J18)	7	18 009	3,9	6	17 426	3,8	5	19 805	4,0
Tuberculosis (A15-A19)**	1	28 315	6,1	2	25 409	5,5	6	19 757	4,0
Human immunodeficiency virus [HIV] disease (B20-B24)	5	22 533	4,8	4	22 128	4,8	7	19 382	4,0
Ischaemic heart diseases (I20-I25)	8	13 863	3,0	7	15 969	3,4	8	15 759	3,2
Other forms of heart disease (I30-I52)	4	23 301	5,0	8	15 777	3,4	9	15 057	3,1
Other viral diseases (B25-B34)	9	13 257	2,9	10	12 434	2,5
Chronic lower respiratory diseases (J40-J47)	9	13 825	3	10	12 384	2,7
Malignant neoplasms of digestive organs (C15-C26)	10	11 061	2,4
Other Natural		208 498	44,6		213 500	46,1		223 594	45,7
Non-natural		56 283	12,0		57 604	12,4		47 186	9,6
Total		467 565	100,2		463 618	100,0		489 744	100,0

*Data from 2018–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024

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

... Category not in top ten.

4.6.2 Leading underlying natural causes of death by sex

The distribution of the ten leading underlying natural causes of death by sex in 2020 is shown in Table 4.6 and indicates different patterns of underlying natural causes between males and females. The ten leading causes of male deaths contributed 41,5% of all male deaths while for females they contributed 48,3% of all deaths. All ten leading causes of death were the same for both sexes, with only two sharing the same rank.

COVID-19 was the leading cause of death among males at 6,4%, while it ranked second for females at 7,0%. However, more females (16 793) died from *COVID-19* than males (15 913). Among females, *diabetes mellitus* was the leading cause of death accounting for 8,2% of deaths, while *hypertensive diseases* at 6,5%, ranked third. *Diabetes mellitus* was the second leading cause of death accounting for 5,0% of deaths followed by *tuberculosis* accounting for 4,9% male deaths. *Cerebrovascular diseases* ranked fourth and *other viral diseases* ranked tenth for both males and females.

Table 4.6- The ten leading underlying causes of death for males and females, 2020*

Causes of death (based on ICD-10)	Male			Female		
	Rank	Number	%	Rank	Number	%
Covid-19 (U071-U072)	1	15 913	6,4	2	16 793	7,0
Diabetes mellitus (E10-E14)	2	12 518	5,0	1	19 545	8,2
Tuberculosis (A15-A19)	3	12 305	4,9	8	7 357	3,1
Cerebrovascular diseases (I60-I69)	4	11 697	4,7	4	15 315	6,4
Influenza and pneumonia (J09-J18)	5	10 148	4,1	6	9 578	4,0
Human immunodeficiency virus [HIV] disease (B20-B24)	6	9 606	3,9	5	9 697	4,1
Hypertensive diseases (I10-I15)	7	9 210	3,7	3	15 606	6,5
Ischaemic heart diseases (I20-I25)	8	8 703	3,5	9	7 033	3,0
Other forms of heart disease (I30-I52)	9	6 919	2,8	7	8 112	3,4
Other viral diseases (B25-B34)	10	6 119	2,5	10	6 257	2,6
Other Natural		109588	44,0		113 075	47,4
Non-natural		36 606	14,7		9 982	4,2
Total		249 332	100,0		238 350	100,0

* Excluding deaths with unspecified sex.

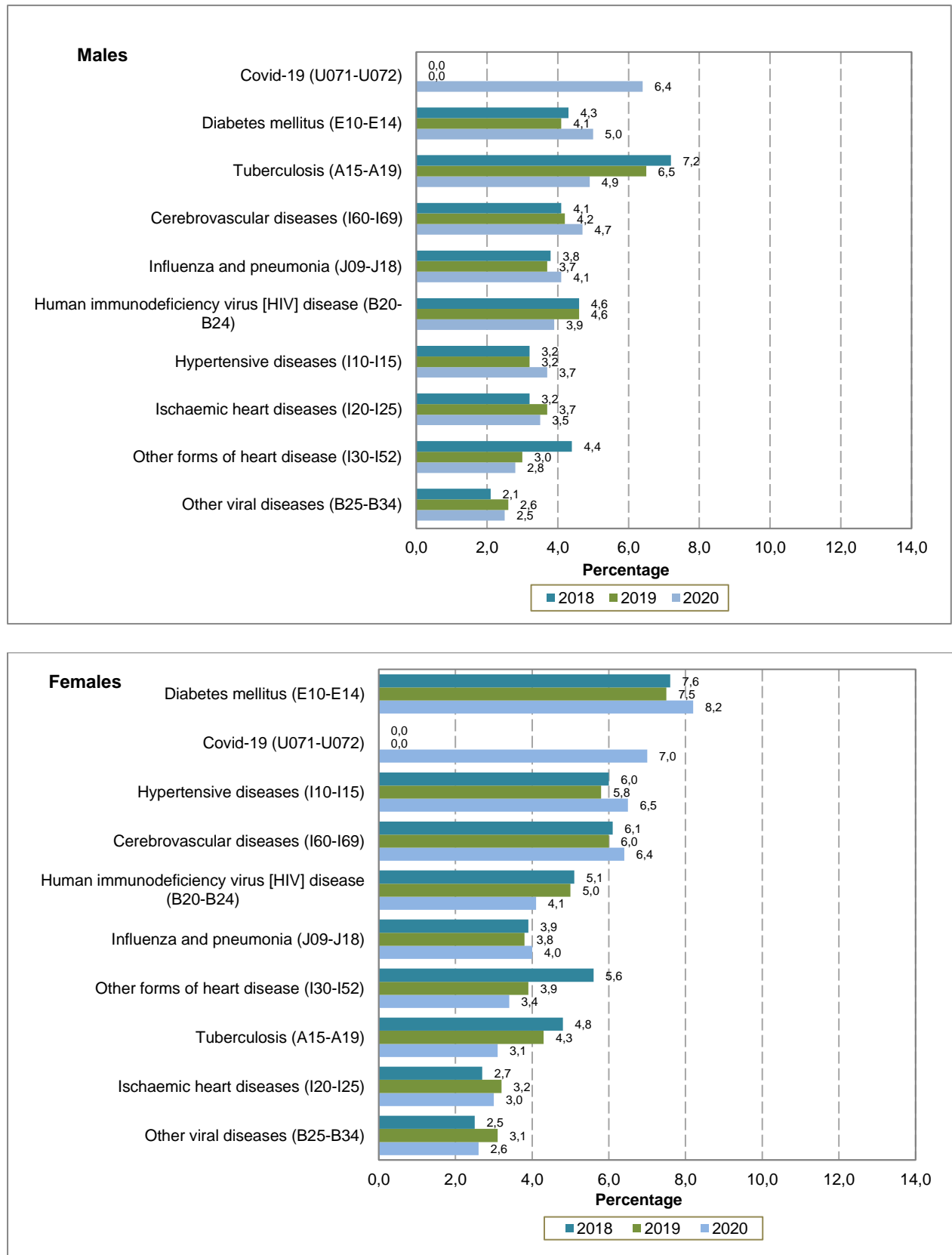
**Including deaths due to *MDR-TB* and *XDR-TB*.

The percentage distribution of deaths associated with the ten leading causes of death classified by sex for the period 2018–2020 is shown in Figure 4.6. Among males, deaths due to *COVID-19*, which were first observed in 2020, ranked first. *Cerebrovascular diseases* continued to increase over the years. On the other hand, deaths due to *tuberculosis* decreased over the years from 7,2% in 2018 to 4,9% in 2020.

Among females, *diabetes mellitus* remained the leading cause of death over the three years. It is noteworthy that in 2020, *diabetes mellitus* increased to 8,2%, the highest in the three years and all causes of death recorded for both males and females during the reference period. *COVID-19* ranked as the second underlying cause of death for women. *Tuberculosis*, *other forms of heart disease* and *human immunodeficiency virus* continued to decline for females in 2020.

The main similarity between males and females is that there was a decline in the proportion of deaths due to *tuberculosis*, *other forms of heart disease* and *HIV diseases* in 2020 compared to the previous two years.

Figure 4.6: Distribution of deaths for the leading causes of death by year of death and sex, 2018-2020



*(1) Data for 2018–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024.

(2) Including deaths due to *MDR-TB* and *XDR-TB*.

4.6.3 Leading underlying natural causes of death by age

Analysis of the broad age groups (0, 1–14, 15–44, 45–64, and 65 and older) is recommended by the World Health Organization for classifying ages for international comparison (WHO, 2009). Table 4.7 shows the ten leading underlying natural causes of death for these age groups. Further decomposition of age and leading underlying natural causes of death are provided in Tables 4.8 (under 5 years) and 4.9 (15–24 years).

Influenza and pneumonia was the only underlying cause of death common for all age groups, although the ranking varied greatly by age. For example, deaths due to *influenza and pneumonia* were the fifth leading underlying cause of death for age zero (5,0%), second for age group 1–14 (4,7%), fifth for age group 15–44 (3,3%) and seventh for age group 45–64 (3,7%) and sixth for age group 65 and older (4,5%). *Other forms of heart diseases* were part of the ten underlying causes of death in all age groups, except infants. *Hypertensive diseases* and *ischaemic heart disease* were among the ten leading underlying causes of death only for those aged 45 and older.

The leading underlying cause of death for infant deaths (age zero) was *respiratory and cardiovascular disorders specific to the perinatal period*, responsible for 14,9% of deaths at this age. *Other disorders originating in the perinatal period* was the second leading cause of death, accounting for 9,4% of deaths. *Disorders related to length of gestation and foetal growth*, which constituted 8,0% of deaths in this age group, was the third leading cause of death. *Intestinal infectious diseases* and *other bacterial diseases* were in the top 10 leading underlying causes for age groups zero and 1–14 years. *Intestinal infectious diseases* which ranked first for deaths of children aged 1–14 responsible for 5,2% ranked sixth for infants at 4,9%.

The second leading underlying cause of death for age group 1–14 was *influenza and pneumonia*, responsible for 4,7% of deaths in this age group, followed by *tuberculosis* with 2,6% of deaths. *Malnutrition* (2,4%) was the fourth leading cause of death, followed by *Cerebral palsy and other paralytic syndromes* (2,1%).

The leading underlying cause of death for the age group 15–44 was *human immunodeficiency virus [HIV] diseases*, constituting 9,6% of deaths, followed by *tuberculosis*, accounting for 8,1% of deaths. *Other viral diseases* ranked third, accounting for 5,8% of deaths. *COVID-19* ranked fourth with 3,4% of deaths and *Influenza and pneumonia* ranked fifth at 3,3%.

Seven of the ten leading causes of death for those aged 45–64 and 65 and older were the same, with differences in rank and the contribution of each cause to the overall number of deaths in each age group. While *COVID-19* was the leading cause of death among those aged 45–64, contributing 9,5% of deaths in this age group, it was the fourth leading cause of death among those aged 65 and older, accounting for 7,5% of deaths. Conversely, *diabetes mellitus* was the leading cause of death for those aged 65 and older (9,4%) but was the second leading underlying cause of death for those aged 45–64 (7,9%).

The six underlying causes of death were not common between the two groups. *Tuberculosis, human immunodeficiency virus* and *other viral diseases* were on the ten leading causes of death for age group 45–64 and not for the age group 65 and older. While *renal failure, chronic lower respiratory diseases* as well as *malignant neoplasms of digestive organs* were on the ten leading causes of death for the 65 years and older age group, and were not listed for the 45–64 age group. It is worth noting that the ten leading causes of death in these age groups are dominated by non-communicable diseases and the only exceptions were *COVID-19, tuberculosis, human immunodeficiency virus, and influenza and pneumonia*, which are communicable diseases.

Table 4.7: The ten leading underlying natural causes of death for broad age groups, 2020

Causes of death (based on ICD-10)	0			1–14			15–44			45–64			65+		
	Rank	Number	%	Rank	Number	%	Rank	Number	%	Rank	Number	%	Rank	Number	%
Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	1	3 011	14,9
Other disorders originating in the perinatal period (P90-P96)	2	1 896	9,4
Disorders related to length of gestation and fetal growth (P05-P08)	3	1 626	8,0
Infections specific to the perinatal period (P35-P39)	4	1 460	7,2
Influenza and pneumonia (J09-J18)	5	1 016	5,0	2	484	4,7	5	3 804	3,3	7	5 390	3,7	6	9 111	4,5
Intestinal infectious diseases (A00-A09)	6	984	4,9	1	532	5,2
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04)	7	806	4,0
Other bacterial diseases (A30-A49)	8	501	2,5	9	180	1,8
Congenital malformations of the circulatory system (Q20-Q28)	9	483	2,4
Other congenital malformations (Q80-Q89)	10	379	1,9
Tuberculosis (A15-A19)	3	263	2,6	2	9 281	8,1	3	7 043	4,9
Malnutrition (E40-E46)	4	245	2,4
Cerebral palsy and other paralytic syndromes (G80-G83)	5	219	2,1
Other forms of heart disease (I30-I52)	6	201	2,0	6	1 899	1,7	10	4 112	2,9	7	8 711	4,3
Episodic and paroxysmal disorders (G40-G47)	7	195	1,9
Human immunodeficiency virus [HIV] disease (B20-B24)	8	184	1,8	1	11 008	9,6	5	6 791	4,7
Metabolic disorders (E70-E90)	10	159	1,6
Other viral diseases (B25-B34)	3	6 606	5,8	9	4 544	3,2
Covid-19 (U071-U072)	4	3 912	3,4	1	13 591	9,5	4	15 110	7,5
Certain disorders involving the immune mechanism (D80-D89)	7	1 893	1,7
Cerebrovascular diseases (I60-I69)	8	1 802	1,6	4	7 012	4,9	2	18 107	9,0
Diabetes mellitus (E10-E14)	9	1 729	1,5	2	11 419	7,9	1	18 891	9,4
Renal failure (N17-N19)	10	1 507	1,3	10	4 102	2,0
Hypertensive diseases (I10-I15)	6	6 310	4,4	3	17 329	8,6
Ischaemic heart diseases (I20-I25)	8	4 912	3,4	5	9 819	4,9
Chronic lower respiratory diseases (J40-J47)	8	5 907	2,9
Malignant neoplasms of digestive organs (C15-C26)	9	4 812	2,4
Other Natural		7 387	36,5		4 393	42,9		40 067	35,1		64 052	44,6		85 371	42,4
Non-natural		673	3,3		3 196	31,2		30 780	26,9		8 591	6,0		3 946	2,0
Total		20 222	100,0		10 251	100,1		114 288	100,0		143 767	100,0		201 216	100,0

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

4.6.4 Leading underlying natural causes of death for children aged below five years by age groups

The ten leading causes of death for neonatal deaths (infants that died within the first 28 days of life [neonates]), post-neonatal deaths (29 days to 11 months [post-neonatal]), all infant deaths (aged less than one year), and deaths among those aged 1–4 are shown in Table 4.8.

Table 4.8 shows that there was no common underlying cause of death for all age groups. Additionally, apart from *congenital malformations of the circulatory system* and *chromosomal abnormalities, not elsewhere classified*, there were no overlapping leading underlying causes of death for those who died during the neonatal and post-neonatal periods. There were three common underlying causes of death for deaths occurring from 29 days and older to under five years of life: *influenza and pneumonia*, *intestinal infectious diseases*, *malnutrition* and *other bacterial diseases*. Their contribution towards deaths within their age groups varied.

Neonatal deaths mainly resulted from *respiratory and cardiovascular disorders specific to the perinatal period*, which was responsible for 26,7% of deaths. The second leading underlying cause of death for neonatal deaths was *other disorders originating in the perinatal period* (17,0%), followed by *disorders related to length of gestation and fetal growth* (13,6%) and *infections specific to the perinatal period*, responsible for 12,8% of deaths in this age group. The ten leading underlying causes of death during the neonatal period constituted 89,8% of deaths in this age group.

The leading cause of death for those who died during the post-neonatal period was *influenza and pneumonia* (11,0%), followed by *intestinal infectious diseases* (10,4%) and *other bacterial diseases* (4,6%). These three causes were the highest contributors of post-neonatal deaths, accounting for just over a quarter (26,0%) of deaths occurring during this period. *Malnutrition* (3,2%) was the fourth leading cause of death, and *metabolic disorders* (2,7%) was the fifth.

Overall, for infants (less than one year), the leading underlying cause of deaths was *respiratory and cardiovascular disorders specific to the perinatal period* (14,9%). *Other disorders originating in the perinatal period* (9,4%) was ranked second. *Disorders related to length of gestation and fetal growth* (8,0%), *infections specific to the perinatal period* (7,2%) and *influenza and pneumonia* (5,0%) were ranked third, fourth and fifth, respectively.

The three leading causes of death for those aged 1–4 were *intestinal infectious diseases* (7,6%), *influenza and pneumonia* (5,6%) and *malnutrition* (4,4%). *Metabolic disorders* (2,4%) was the fourth leading cause of death while *tuberculosis* (2,0%) was the fifth leading cause of death.

For those under five years, *respiratory and cardiovascular disorders specific to the perinatal period* was the leading underlying cause of death responsible for 11,9% of deaths, followed by *other disorders originating in the perinatal period* (7,5%) and *disorders related to length of gestation and fetal growth* which accounted for 6,4% of deaths in this age group. *Infections specific to the perinatal period* was ranked the fourth leading underlying cause of death among the under-5 mortality, responsible for 5,8% of deaths.

Table 4.8: The ten underlying natural causes of death for infants and children aged below five years, 2020

Causes of death (based on ICD-10)	Neonatal (0-28 days)			Post-neonatal (29 days to 11 months)			Less than 1 year			1-4 years			Under 5 years		
	Rank	Number	%	Rank	Number	%	Rank	Number	%	Rank	Number	%	Rank	Number	%
Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	1	2 969	26,7	1	3 011	14,9	1	3 015	11,9
Other disorders originating in the perinatal period (P90-P96)	2	1 891	17,0	2	1 896	9,4	2	1 897	7,5
Disorders related to length of gestation and fetal growth (P05-P08)	3	1 506	13,6	3	1 626	8,0	3	1 628	6,4
Infections specific to the perinatal period (P35-P39)	4	1 416	12,8	4	1 460	7,2	4	1 461	5,8
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04)	5	801	7,2	7	806	4,0	7	809	3,2
Haemorrhagic and haematological disorders of fetus and newborn (P50-P61)	6	333	3,0
Digestive system disorders of fetus and newborn (P75-P78)	7	316	2,8
Other congenital malformations (Q80-Q89)	8	314	2,8	10	379	1,9
Congenital malformations of the circulatory system (Q20-Q28)	9	254	2,3	6	229	2,5	9	483	2,4	9	539	2,1
Chromosomal abnormalities, not elsewhere classified (Q90-Q99)	10	173	1,6	10	133	1,5
Influenza and pneumonia (J09-J18)	1	1 001	11,0	5	1 016	5,0	2	283	5,6	6	1 299	5,1
Intestinal infectious diseases (A00-A09)	2	948	10,4	6	984	4,9	1	384	7,6	5	1 368	5,4
Other bacterial diseases (A30-A49)	3	421	4,6	8	501	2,5	7	95	1,9	8	596	2,4
Malnutrition (E40-E46)	4	294	3,2	3	222	4,4	10	526	2,1
Metabolic disorders (E70-E90)	5	244	2,7	4	120	2,4
Other acute lower respiratory infections (J20-J22)	7	228	2,5
Other diseases of the respiratory system (J95-J99)	8	169	1,9	8	80	1,6
Other viral diseases (B25-B34)	9	138	1,5
Tuberculosis (A15-A19)	5	99	2,0
Other forms of heart disease (I30-I52)	6	96	1,9
Human immunodeficiency virus [HIV] disease (B20-B24)	9	76	1,5
Episodic and paroxysmal disorders (G40-G47)	10	73	1,4
Other Natural		1 036	9,3		4 735	51,9		7 387	36,5		2 192	43,2		10 131	40,1
Non-natural		94	0,8		579	6,3		673	3,3		1 351	26,6		2 024	8,0
Total		11 103	100,0		9 119	100,0		20 222	100,0		5 071	100,0		25 293	100,0

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

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

According to the WHO recommendations, the 15–24 age group must also be included in the analysis for international comparison (WHO, 1992). This analysis is provided in Table 4.9. In 2020, *tuberculosis* was the leading cause of death for those aged 15–24, accounting for 5,9% of deaths, followed by *human immunodeficiency virus [HIV] disease* (5,6%) and *other viral diseases* (3,6%). *Influenza and pneumonia, episodic and paroxysmal disorders* and *other forms of heart disease* were the fourth, fifth and sixth leading causes of death, respectively. The ten leading causes of death in this age group contributed just over a quarter (25,2%) of deaths in this age group.

Table 4.9: The ten leading underlying causes of death for the population aged 15–24 years, 2020

Causes of death (based on ICD-10)	15-24		
	Rank	Number	Percentage (%)
Tuberculosis (A15-A19)	1	1 017	5,9
Human immunodeficiency virus [HIV] disease (B20-B24)	2	956	5,6
Other viral diseases (B25-B34)	3	613	3,6
Influenza and pneumonia (J09-J18)	4	450	2,6
Episodic and paroxysmal disorders (G40-G47)	5	258	1,5
Other forms of heart disease (I30-I52)	6	257	1,5
Covid-19 (U071-U072)	7	247	1,4
Certain disorders involving the immune mechanism (D80-D89)	8	185	1,1
Other bacterial diseases (A30-A49)	9	171	1,0
Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81-C96)	10	170	1,0
Other Natural		5 362	31,3
Non-natural		7 465	43,5
All Causes		17 151	100,0

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

4.6.6 Leading underlying natural causes of death by province of death occurrence

This section looks at province-level variations in mortality and causes of death. Table 4.10 shows the provincial variations in the ranking of the ten leading underlying causes of death for 2020. Across the nine provinces, *COVID-19* was a leading underlying cause of death in Western Cape (11,2%), Eastern Cape (9,4%), Gauteng (7,0%) and Free State (6,8%). Whilst *diabetes mellitus* was the leading cause of death in Kwa-Zulu Natal (7,4%), Limpopo (7,2%) and Mpumalanga (6,6%), and *hypertensive diseases* was leading in North West (6,5%) and Northern Cape (6,2%).

Five underlying causes of death were common in all nine provinces, namely *diabetes mellitus*, *cerebrovascular diseases*, *HIV disease*, *hypertensive diseases* and *tuberculosis*. However, the ranks of these causes of death differed between provinces. For example, *diabetes mellitus* ranked first in Kwa-Zulu Natal, Mpumalanga and Limpopo and second in Western Cape, Eastern Cape, North West and Gauteng.

Mpumalanga (2,5%) and North West (3,3%) had the lowest proportions of *COVID-19* deaths, ranking tenth and ninth in the respective provinces. The proportion of deaths due to *tuberculosis* were high in

the Eastern Cape with 5,3% of deaths in the province, followed by the Northern Cape with 4,8% of deaths and the North West province with 4,7%. It had the lowest proportions of deaths in Gauteng (2,8%), Western Cape (3,4%) and the Free State (3,6%). In all three provinces, *tuberculosis* ranked eighth. Proportions of deaths due to *HIV disease* ranked second as the leading cause of death (5,8%) in Northern Cape and fifth in both Free State (5,4%) and Western Cape (5,2%).

Western Cape was the only province where *malignant neoplasms of digestive organs* (3,7%) and *malignant neoplasms of respiratory and intrathoracic organs* (3,3%) were in the top ten leading underlying causes of death. It was also the only province where *influenza and pneumonia* were not on the ten leading underlying causes of death. Only Limpopo had *renal failure* (2,2%) and *intestinal infectious diseases* (2,0%) in the top ten leading underlying causes of death, ranking ninth and tenth respectively.

Detailed information on the distribution of the ten leading underlying causes by province, sex and age is provided in Appendices M to M9.

Table 4.10: The ten leading underlying natural causes of death in each province of death occurrence, 2020*

Causes of death (based on ICD-10)	Western Cape			Eastern Cape			Northern Cape			Free State			KwaZulu-Natal			North West			Gauteng			Mpumalanga			Limpopo		
	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%	Ra nk	No.	%
Covid-19 (U071-U072)	1	6 209	11,2	1	7 324	9,4	5	772	5,2	1	2 167	6,8	2	6 107	6,5	9	1 019	3,3	1	7 575	7,0	10	749	2,5
Diabetes mellitus (E10-E14)	2	4 241	7,6	2	5 683	7,3	4	790	5,3	3	1 980	6,2	1	6 968	7,4	2	1 685	5,5	2	5 525	5,1	1	1 970	6,6	1	3 220	7,2
Ischaemic heart diseases (I20-I25)	3	3 794	6,8	8	526	3,5	10	769	2,4	8	2 936	3,1	10	609	2,0	6	3 847	3,5	8	1 077	3,6
Cerebrovascular diseases (I60-I69)	4	3 224	5,8	5	4 137	5,3	3	857	5,7	4	1 777	5,6	3	5 709	6,0	3	1 506	4,9	3	5 141	4,7	2	1 772	5,9	2	2 909	6,5
Human immunodeficiency virus [HIV] disease (B20-B24)	5	2909	5,2	6	3446	4,4	2	869	5,8	5	1712	5,4	6	3760	4,0	7	1189	3,9	9	2566	2,4	6	1208	4,0	6	1701	3,8
Hypertensive diseases (I10-I15)	6	2 645	4,8	3	4 670	6,0	1	923	6,2	2	2 151	6,8	5	4 040	4,3	1	1 990	6,5	5	4 366	4,0	4	1 473	4,9	4	2 550	5,7
Malignant neoplasms of digestive organs (C15-C26)	7	2 086	3,7
Tuberculosis (A15-A19)	8	1885	3,4	4	4149	5,3	6	723	4,8	8	1135	3,6	4	4206	4,4	4	1447	4,7	8	3064	2,8	5	1306	4,4	5	1812	4,1
Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	9	1 849	3,3
Chronic lower respiratory diseases (J40-J47)	10	1 756	3,2	8	2 358	3,0	9	453	3,0	
Influenza and pneumonia (J09-J18)	7	2 839	3,6	7	626	4,2	6	1689	5,3	7	3 113	3,3	5	1 367	4,5	4	4 516	4,1	3	1 596	5,3	3	2 809	6,3
Other forms of heart disease (I30-I52)	9	2 048	2,6	7	1258	4,0	9	2887	3,1	8	1 052	3,4	7	3 715	3,4	9	1 016	3,4	8	1 247	2,8
Other viral diseases (B25-B34)	10	1762	2,3	10	440	2,9	9	932	2,9	10	2353	2,5	6	1196	3,9	10	2556	2,3	7	1081	3,6	7	1 603	3,6
Renal failure (N17-N19)	9	999	2,2	
Intestinal infectious diseases (A00-A09)	10	894	2,0		
Other Natural		19164	33,9		32568	41,7		6 784	45,3		13 596	42,8		41 886	44,3		14 926	48,9		55 338	50,8		13 721	45,9		21 200	47,7
Non-natural		5 867	10,5		7 057	9,0		1 199	8,0		2 635	8,3		10 617	11,2		2 559	8,4		10 722	9,8		2 896	9,7		3 471	7,8
All causes		55 644	100,0		78 041	100,0		14 962	100,0		31 801	100,0		94 582	100,0		30 545	100,0		108 931	100,0		29 865	100,0		44 415	100,0

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

4.6.7 Underlying causes of death by district/metropolitan municipality of death occurrence

4.6.7.1 Main group

The main groups of underlying natural causes of death by district/metropolitan municipalities are provided in Appendices N to O2. The number of deaths by main groups of causes of death for each district/metropolitan municipality of death occurrence are provided in Appendices N, while Appendices O show the main groups of causes of death for each district/metropolitan municipality of death occurrence by their percentage distribution. Information at a geographic level lower than district is not provided in this release; however, it is available on request from Stats SA.

4.6.7.2 Broad groups

Appendix P shows information on the ten leading natural causes of death by district/metropolitan municipality.

4.6.7.3 Underlying natural causes of death by population group

Due to a large proportion of unknown or unspecified cases, the ten leading underlying natural causes of death by population group are not discussed in this section. The discussion and distribution of underlying causes of death by population group are provided in appendices Q and Q.1.

4.7 Non-natural causes of death

The focus of this subsection is on 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 profiles 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.

On the death notification form, where insufficient details are provided to code the non-natural cause of death accurately, Stats SA codes such deaths as *other external causes of accidental injury* or *event of undetermined intent* in line with the recommendations of WHO in classifying unknown non-natural causes of death (WHO, 2009b). This therefore contributes to the high percentage of unspecified causes of non-natural deaths. Results therefore on non-natural causes of death should therefore be interpreted mindful of the fact that nearly three-quarters of non-natural causes of death were not adequately classified. The unexpected lower number of deaths due to transport accidents, assault, complications of medical and surgical care, intentional self-harm or sequelae of external causes of morbidity and mortality may have been partly the result of causes classified as other external causes of accidental injury or event of undetermined intent.

Table 4.11 shows the number and percentage distribution of broad groups of non-natural causes of death. A proportion of 9,6% (refer to Table 4.3) of all deaths that occurred in 2020 were due to external causes of morbidity and mortality. It is observed that the majority of non-natural causes of death resulted from *other external causes of accidental injury* (70,8%). In terms of all deaths, *other external causes of accidental injury* accounted for 6,8%.

Assault was the second most common non-natural cause of death and accounted for 12,0% of non-natural causes and 1,2% of all reported deaths. The third most common cause of non-natural deaths was *transport accidents* at 9,7% and constituting 0,9% of all deaths, followed by *event of undetermined intent* (5,5%) and *complications of medical and surgical care* (1,4%). About 0,4% of non-natural deaths were due to *intentional self-harm* and 0,1% were due to *sequelae of external causes of morbidity and mortality*.

Table 4.11: Distribution of non-natural causes of death by broad groups, 2020

Causes of death (based on ICD-10, 2016)	Number	Percentage of non-natural causes	Percentage of all causes (N = 489 744)
Other external causes of accidental injury (W00-X59)	33 386	70,8	6,8
Assault (X85-Y09)	5 668	12,0	1,2
Transport accidents (V01-V99)	4 592	9,7	0,9
Event of undetermined intent (Y10-Y34)	2 603	5,5	0,5
Complications of medical and surgical care (Y40-Y84)	683	1,4	0,1
Intentional self-harm (X60-X84)	211	0,4	0,0
Sequelae of external causes of morbidity and mortality (Y85-Y89)	43	0,1	0,0
All non-natural	47 186	100,0	9,5

A breakdown of the 33 386 deaths due to *other external causes of accidental injury* identified in Table 4.11 are shown in Table 4.12, for a better understanding of deaths due to this cause. The table shows that almost half of these deaths were due to *accidental exposure to other and unspecified factors*. This includes exposure to unspecified factors causing fracture and exposure to other unspecified factors. The majority of deaths in this group were *accidental exposure to other and unspecified factors* (44,0%). This was followed by deaths due to *exposure to inanimate mechanical forces* which were the second leading cause, responsible for 24,1% of deaths in this group. This group includes discharge from other and unspecified firearms as well as contact with a knife or sword. The third most common cause was *other accidental threats to breathing* (14,9%), which includes accidental hanging and strangulation. The fourth most reported death due to other external causes of accidental injury was *exposure to smoke, fire and flames* (7,0%), followed by *accidental drowning and submersion* (4,0%).

Table 4.12: Distribution of deaths due to other external causes of accidental injury, 2020

Cause of death (based on ICD-10)	Number	Percentage
Accidental exposure to other and unspecified factors (X58-X59)	14 702	44,0
Exposure to inanimate mechanical forces (W20-W49)	8 056	24,1
Other accidental threads to breathing (W75-W84)	4 957	14,9
Exposure to smoke, fire and flames (X00 - X09)	2 341	7,0
Accidental drowning and submersion(W65-W74)	1 343	4,0
Accidental poisoning by and exposure to noxious substance(X40-X49)	814	2,4
Exposure to electric current, radiation and extreme ambient air temperature and pressure (W85-W99)	567	1,7
Exposure to forces of nature(X30 - X39)	340	1,0
Falls (W00-W19)	150	0,5
Contact with venomous animals and plants(X20-X29)	42	0,1
Exposure to animate mechanical forces (W50-W64)	35	0,1
Contact with heat and hot substances(X10-X19)	22	0,1
Overexertion, travel and privation(X50-X59)	17	0,1
Total	33 386	100,0

4.7.1 Non-natural causes of death by age and sex

This subsection looks at the distribution of non-natural causes of death by sex and broad age groups (0, 1–14, 15–29, 30–44, 45–64 and 65+). For international comparison, age group 15–44 has been divided into two age groups (15–29 and 30–44) as recommended by the WHO (1992).

Table 4.13 shows the distribution of non-natural causes of death by sex and broad age groups (0, 1–14, 15–29, 30–44, 45–64 and 65 and older) for deaths that occurred in 2020. The absolute numbers and percentages for both sexes may not be similar to the results presented in Table 4.11, as deaths with missing sex and age have been excluded.

The first section of Table 4.13 showing both sexes indicates that for both sexes, the age group mostly affected by non-natural causes of death was age group 15–29, where 40,7% of all deaths in this age group were due to non-natural causes. The age group least affected by non-natural causes for both sexes was 65 years and older, where just 2,0% of deaths in this age group were due to non-natural causes. *Assault* was more common among those aged 15–29, accounting for 17,6% of non-natural deaths in this age group. *Complications of medical and surgical care* were highest among the elderly (7,7%), while transport accidents were highest among those aged 1–14 at 12,4%.

Differentials by sex show higher proportions of non-natural deaths for males at 14,7% compared to 4,2% of female non-natural deaths. Moreover, for each of the age groups, except for age zero, males had higher proportions of deaths due to non-natural causes compared to females, with the gap much wider at age group 15–29 where as much as 54,6% of male deaths resulted from non-natural causes compared to 18,2% of females in the same age group. This is the only age group where the proportion of non-natural deaths is more than that of natural deaths for males.

Comparison between male and female deaths due to non-natural causes shows that the proportion of deaths due to *assault* was high for males (13,4%) compared to females (6,9%). For both sexes, non-natural deaths due to *complications of medical and surgical care* were higher at infancy (those aged less than a year) as well as among the elderly (those aged 65 and older). This cause of death was also high among females, with the proportion of female deaths due to complications of medical and surgical care at 3,4% compared to 0,9% for males.

The proportion of non-natural deaths due to *transport accidents* were higher among females (11,6%) compared to males (9,3%). For each of the sexes, *intentional self-harm* and *sequelae of external causes of morbidity and mortality* were uncommon, each comprising less than 1,0% of deaths for each sex.

For all age groups, *other external cause of accidental injury* was the highest non-natural cause of death. However, these broad groups do not give valuable information as they cover non-natural deaths not adequately classified.

Table 4.13: Underlying non-natural causes of death by age group and sex, 2020

Causes of death based on ICD-10	Number							Percentage						
	0	1–14	15–29	30–44	45–64	65+	All ages	0	1–14	15–29	30–44	45–64	65+	All ages
Both sexes														
Transport accidents (V01-V99)	20	395	1 335	1 638	965	239	4 592	3,0	12,4	9,2	10,0	11,2	6,1	9,7
Other external causes of accidental injury (W00-X59)	614	2 461	9 537	11 563	6 181	3 030	33 386	91,2	77,0	66,1	70,7	71,9	76,8	70,8
Intentional self-harm (X60-X84)	0	7	86	69	35	14	211	0,0	0,2	0,6	0,4	0,4	0,4	0,4
Assault (X85-Y09)	5	68	2 540	2 199	676	180	5 668	0,7	2,1	17,6	13,5	7,9	4,6	12,0
Event of undetermined intent (Y10-Y34)	17	246	889	778	513	160	2 603	2,5	7,7	6,2	4,8	6,0	4,1	5,5
Complications of medical and surgical care (Y40-Y84)	17	18	44	93	206	305	683	2,5	0,6	0,3	0,6	2,4	7,7	1,4
Sequelae of external causes of morbidity and mortality (Y85-Y89)	0	1	4	5	15	18	43	0,0	0,0	0,0	0,0	0,2	0,5	0,1
Sub total	673	3 196	14 435	16 345	8 591	3 946	47 186	100	100	100	100	100	100	100
Non-natural causes	673	3 196	14 435	16 345	8 591	3 946	47 186	3,3	31,2	40,7	20,7	6,0	2,0	9,6
Natural causes	19 549	7 055	21 005	62 503	135 176	197 270	442 558	96,7	68,8	59,3	79,3	94,0	98,0	90,4
All causes	20 222	10 251	35 440	78 848	143 767	201 216	489 744	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Males														
Transport accidents (V01-V99)	13	230	1 013	1 297	710	150	3 413	3,7	11,5	8,6	9,5	10,8	7,0	9,3
Other external causes of accidental injury (W00-X59)	316	1 580	7 944	9 787	4 820	1 635	26 082	90,5	79,2	67,1	71,5	73,1	76,1	71,3
Intentional self-harm (X60-X84)	0	6	63	60	28	11	168	0,0	0,3	0,5	0,4	0,4	0,5	0,5
Assault (X85-Y09)	3	43	2 294	1 918	550	108	4 916	0,9	2,2	19,4	14,0	8,3	5,0	13,4
Event of undetermined intent (Y10-Y34)	9	124	495	577	355	97	1 657	2,6	6,2	4,2	4,2	5,4	4,5	4,5
Complications of medical and surgical care (Y40-Y84)	8	12	21	41	125	137	344	2,3	0,6	0,2	0,3	1,9	6,4	0,9
Sequelae of external causes of morbidity and mortality (Y85-Y89)	0	1	3	3	8	11	26	0,0	0,1	0,0	0,0	0,1	0,5	0,1
Sub total	349	1 996	11 833	13 683	6 596	2 149	36 606	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Non-natural causes	349	1 996	11 833	13 683	6 596	2 149	36 606	3,2	35,7	54,6	29,6	8,3	2,5	14,7
Natural causes	10 465	3 601	9 836	32 620	72 460	83 744	212 726	96,8	64,3	45,4	70,4	91,7	97,5	85,3
All causes	10 814	5 597	21 669	46 303	79 056	85 893	249 332	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Females														
Transport accidents (V01-V99)	7	164	317	326	251	89	1 154	2,3	13,8	12,9	13,7	13,4	5,0	11,6
Other external causes of accidental injury (W00-X59)	285	870	1 486	1 553	1 260	1 373	6 827	91,6	73,4	60,4	65,3	67,1	77,5	68,4
Intentional self-harm (X60-X84)	0	1	23	9	6	3	42	0,0	0,1	0,9	0,4	0,3	0,2	0,4
Assault (X85-Y09)	2	23	226	248	122	69	690	0,6	1,9	9,2	10,4	6,5	3,9	6,9
Event of undetermined intent (Y10-Y34)	8	121	383	189	152	63	916	2,6	10,2	15,6	8,0	8,1	3,6	9,2
Complications of medical and surgical care (Y40-Y84)	9	6	23	50	81	167	336	2,9	0,5	0,9	2,1	4,3	9,4	3,4
Sequelae of external causes of morbidity and mortality (Y85-Y89)	0	0	1	2	7	7	17	0,0	0,0	0,0	0,1	0,4	0,4	0,2
Sub total	311	1 185	2 459	2 377	1 879	1 771	9 982	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Non-natural causes	311	1 185	2 459	2 377	1 879	1 771	9 982	3,4	25,8	18,2	7,5	2,9	1,5	4,2
Natural causes	8 747	3 411	11 042	29 458	62 386	113 324	228 368	96,6	74,2	81,8	92,5	97,1	98,5	95,8
All causes	9 058	4 596	13 501	31 835	64 265	115 095	238 350	100,0	100,0	100,0	100,0	100,0	100,0	100,0

4.7.2 Non-natural causes of death by province of death occurrence

The distribution of the underlying non-natural causes of death by province of death occurrence for 2020 is shown in Table 4.14. It is observed that KwaZulu-Natal (11,2%) is the province with the highest proportion of deaths due to non-natural causes; this is consistent with previous years. Western Cape has the second highest proportion of deaths due to non-natural causes at 10,5%, followed by Gauteng at 9,8%. Mpumalanga was the fourth with 9,7% while Eastern Cape ranked fifth at 9,0%. The lowest proportions of deaths due to non-natural causes were observed in Northern Cape (8,0%) and Limpopo (7,8%).

The most common underlying cause of non-natural deaths in all provinces was *other external causes of accidental injury* where more than half of non-natural deaths resulted from this broad group in each province, except for Northern Cape (48,3%). The proportion of deaths due to *other external causes of accidental injury* was highest in Gauteng (78,5%), Mpumalanga (75,0%) and Western Cape (72,5). Western Cape (17,9%) had the highest proportion of deaths due to *assault*, followed by Northern Cape (17,6%) and Eastern Cape at 16,7%. Deaths due to *assault* were lowest in Limpopo (7,3%) and Mpumalanga (7,5%).

Deaths due to *transport accidents* were highest in Limpopo, responsible for 27,2% of deaths, followed by Northern Cape at 23,9% and North West at 18,4%. Traditionally, Limpopo has always had the highest proportion of *transport accidents* in South Africa compared to the rest of the other provinces. The same can be said about *assault* in the Western Cape, which has generally been higher than the rest of the other provinces.

Complications of medical and surgical care, intentional self-harm and sequelae of external causes of morbidity and mortality were the least common, each contributing under 3,0% or less of non-natural deaths in each province, except for Northern Cape where 4,2% of non-natural deaths were due to *intentional self-harm*.

4.7.3 Non-natural causes of death by district municipalities

The proportion of deaths due to non-natural causes of death for each district is provided in appendix O. Non-natural causes of death are in the column labelled external causes of morbidity and mortality (V01-Y98).

Table 4.14: Underlying non-natural causes of death by province, 2020

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)	287	4,9	651	9,2	286	23,9	179	6,8	1 130	10,6	472	18,4	300	2,8	336	11,6	943	27,2
Other external causes of accidental injury (W00-X59)	4 251	72,5	4 769	67,6	579	48,3	1 828	69,4	7 659	72,1	1 601	62,6	8 412	78,5	2 171	75,0	1 992	57,4
Intentional self-harm (X60-X84)	17	0,3	22	0,3	50	4,2	5	0,2	066	0,6	4	0,2	20	0,2	017	0,6	10	0,3
Assault (X85-Y09)	1 048	17,9	1 180	16,7	211	17,6	375	14,2	1 176	11,1	278	10,9	911	8,5	216	7,5	254	7,3
Event of undetermined intent (Y10-Y34)	167	2,8	389	5,5	60	5,0	208	7,9	439	4,1	172	6,7	837	7,8	134	4,6	187	5,4
Complications of medical and surgical care (Y40-Y84)	95	1,6	042	0,6	011	0,9	038	1,4	131	1,2	032	1,3	230	2,1	020	0,7	082	2,4
Sequelae of external causes of morbidity and mortality (Y85-Y89)	2	0,0	4	0,1	2	0,2	2	0,1	16	0,2	0	0,0	12	0,1	2	0,1	3	0,1
SubTotal	5 867	100,0	7 057	100,0	1 199	100,0	2 635	100,0	10 617	100,0	2 559	100,0	10 722	100,0	2 896	100,0	3 471	100,0
Non-Natural causes	5 867	10,5	7 057	9,0	1 199	8,0	2 635	8,3	10 617	11,2	2 559	8,4	10 722	9,8	2 896	9,7	3 471	7,8
Natural causes	49 777	89,5	70 984	91,0	13 763	92,0	29 166	91,7	83 965	88,8	27 986	91,6	98 209	90,2	26 969	90,3	40 944	92,2
Total	55 644	100,0	78 041	100,0	14 962	100,0	31 801	100,0	94 582	100,0	30 545	100,0	108 931	100,0	29 865	100,0	44 415	100,0

*Excluding deaths that occurred outside South Africa and deaths with unspecified province of death.

4.8 Comparison between immediate, contributing and underlying causes of death

This subsection provides information on the total number of causes of death reported on each form. As previously mentioned in section 4.2, the death notification form provides for the recording of multiple causes of death. Section G of both death notification forms (BI-1663 and DHA-1663) makes provision for several causes to be reported on the form (see Appendix B). A maximum number of six causes can be recorded on the death notification form. These causes are recorded as immediate, contributing or underlying causes of death (see definitions in Appendix A).

Table 4.15 aggregates the total number of causes mentioned on each form and groups these in broad groups of causes of death. The broad groups of causes of death were then ranked, and the 20 leading causes based on all causes of death recorded on each form. The list includes all causes of death both natural and non-natural, as well as deaths due to symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified to indicate the frequency of mentioning any cause on the death notification form.

In 2020, the most frequently reported cause of death was *other forms of heart disease* and was recorded on 70 307 death notification forms. In terms of percentage distribution, about 8,3% of all death notification forms had *other forms of heart disease* recorded as either an immediate, contributing or underlying cause of death. The second most reported cause was *Ill-defined and unknown causes of mortality (R95-R99)* (8,0%), mentioned on 67 762 forms. *Hypertensive diseases* (8,0%), *influenza and pneumonia* (6,1%) and *diabetes mellitus* (5,0%) were the third, fourth and fifth most reported causes of death, respectively.

Table 4.15: Distribution of the 20 most commonly reported causes of death, 2020

Rank	Causes of death (based on ICD-10)	Number of deaths in which the causes was reported	Percentage of all deaths
1	Other forms of heart disease (I30-I52)	70 307	8,3
2	Ill-defined and unknown causes of mortality (R95-R99)	67 762	8,0
3	Hypertensive diseases (I10-I15)	67 634	8,0
4	Influenza and pneumonia (J09-J18)	51 611	6,1
5	Diabetes mellitus (E10-E14)	42 086	5,0
6	Cerebrovascular diseases (I60-I69)	38 435	4,5
7	Other external causes of accidental injury (W00-X59)	35 322	4,2
8	Renal failure (N17-N19)	34 877	4,1
9	Covid-19 (U071-U072)	33 233	3,9
10	Tuberculosis (A15-A19)	30 560	3,6
11	Other bacterial diseases (A30-A49)	26 436	3,1
12	Other diseases of the respiratory system (J95-J99)	20 785	2,5
13	Other viral diseases (B25-B34)	20 073	2,4
14	Human immunodeficiency virus [HIV] disease (B20-B24)	19 947	2,4
15	Ischaemic heart diseases (I20-I25)	19 892	2,3
16	Chronic lower respiratory diseases (J40-J47)	16 050	1,9
17	Metabolic disorders (E70-E90)	14 738	1,7
18	Malignant neoplasms of ill-defined, secondary and unspecified sites (C76-C80)	13 339	1,6
19	Other acute lower respiratory infections (J20-J22)	12 850	1,5
20	Intestinal infectious diseases (A00-A09)	10 409	1,2

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

All the natural underlying causes of death that appeared among the ten leading causes of death also appeared among the twenty-five most commonly mentioned causes. The ten leading underlying natural causes of death shown in Table 4.5 are presented in Table 4.16 to show 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.

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. For example, 27 066 deaths had *cerebrovascular diseases* as the underlying cause and another 10 863 deaths had it as an immediate or contributing cause. This gives a total of 37 929 death notification forms that had *cerebrovascular diseases* mentioned on them. The table further shows that in over 80,0% of death notification forms where *COVID-19* (96,4%), *HIV disease* (90,5%) and *ischaemic heart diseases* (84,7%) were mentioned, they were selected as underlying causes. In less than half of the cases where *influenza and pneumonia* (38,9%), *hypertensive diseases* (36,4%) and *other forms of heart disease* (26,9%) were mentioned, they were selected as the underlying causes.

Table 4.16: Number and percentage of deaths selected as underlying or reported as immediate or contributing causes of death, 2020

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
Covid-19 (U071-U072)	1	32 757	1 212	33 969	96,4	3,6	100,0
Diabetes mellitus (E10-E14)	2	32 100	10 999	43 099	74,5	25,5	100,0
Cerebrovascular diseases (I60-I69)	3	27 066	10 863	37 929	71,4	28,6	100,0
Hypertensive diseases (I10-I15)	4	24 847	43 378	68 225	36,4	63,6	100,0
Influenza and pneumonia (J09-J18)	5	19 805	31 159	50 964	38,9	61,1	100,0
Tuberculosis (A15-A19)*	6	19 757	10 643	30 400	65,0	35,0	100,0
Human immunodeficiency virus [HIV] disease (B20-B24)	7	19 382	2 038	21 420	90,5	9,5	100,0
Ischaemic heart diseases (I20-I25)	8	15 759	2 848	18 607	84,7	15,3	100,0
Other forms of heart disease (I30-I52)	9	15 057	41 010	56 067	26,9	73,1	100,0
Other viral diseases (B25-B34)	10	12 434	8 348	20 782	59,8	40,2	100,0

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

4.9 Understanding COVID-19 in South Africa

South Africa, like many other countries, experienced the impact of the COVID-19 pandemic. On 05 March 2020 the Minister of Health made an official announcement of the first confirmed case of COVID-19 in South Africa with the first local death from the disease being reported on 27 March 2020 (Government of South Africa, 2020). Subsequently, the government took various measures to curb the spread of the virus, including lockdowns of varying severity, travel restrictions, and social distancing guidelines. In December 2020, South Africa experienced a second wave of COVID-19 infections, mostly with infections from the SARS-CoV-2 Beta variant (Network for Genomic Surveillance in South Africa [NGS-SA], 2022).

Figure 4.7 shows the COVID-19 mortality pattern across the different age groups by sex. It is observed that mortality rates were relatively low during infancy and childhood (although slightly higher in age group zero years) up to 19 years. From age 20, deaths began to rise steadily for both sexes albeit being higher among females until age 39. From ages 40–64, male deaths surpassed female deaths with marginal differences, with peak mortality also observed at age group 60–64 for both sexes. Although a steady decline is observed for both sexes from ages 65–90, there were more female deaths in the same age groups with a widening gap from age groups 70 and above.

Figure 4.7: Number of COVID-19 deaths by age and sex, 2020

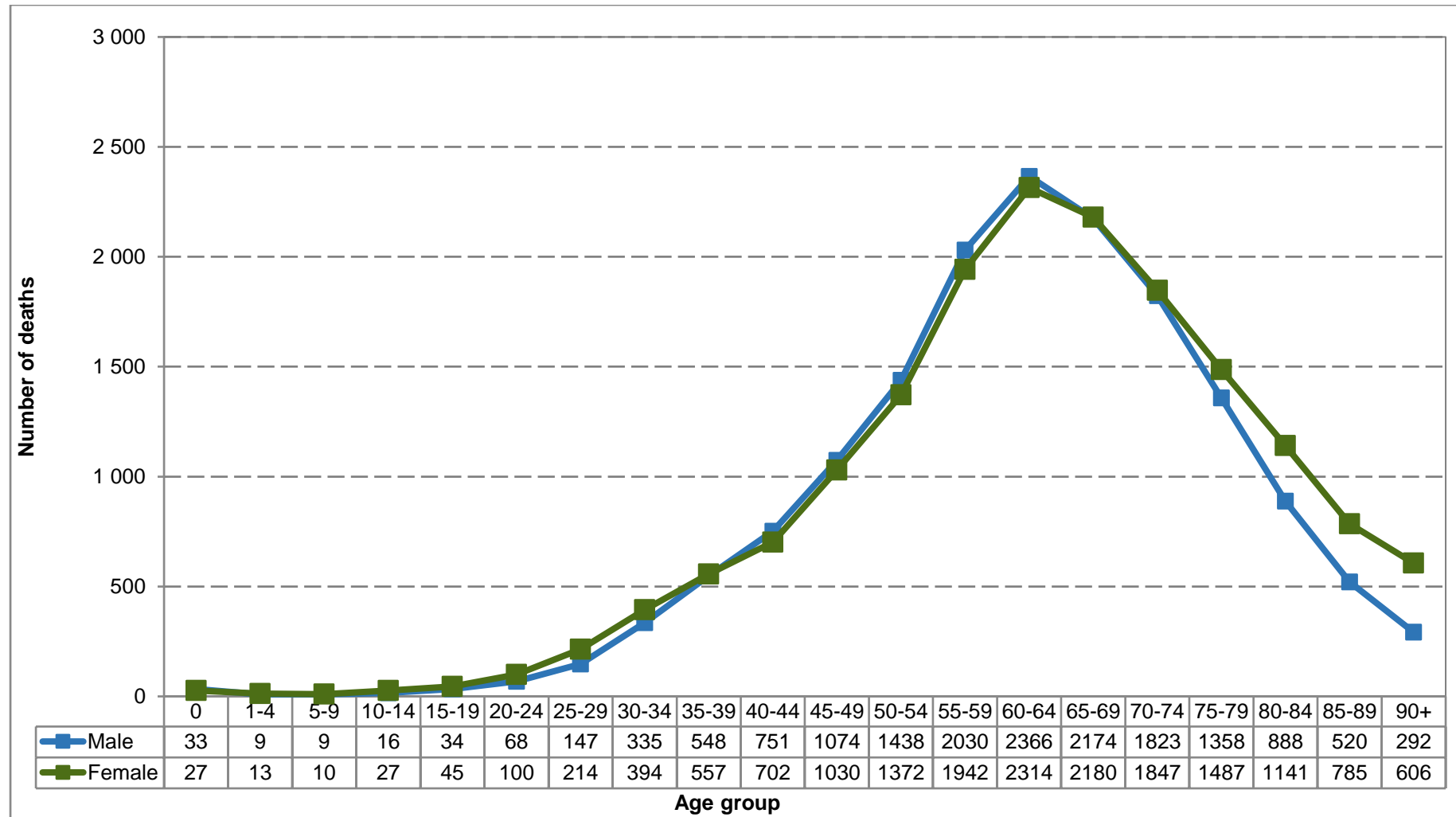


Figure 4.8 shows the distribution of deaths from COVID-19 by month of occurrence. The graph shows that in the early stage of the outbreak, mortality rates were relatively low with only nine deaths occurring in March. By the end of April deaths had rapidly increased to 146, rising fourfold by May and June to 667 and 2 730, respectively, and reaching peak mortality in July with 8 717 deaths. From August, a sharp decline in mortality was observed with 5 952 deaths, followed by a further decline in September with mortality levels reaching their lowest in October at 1 434 deaths. A second increase was observed from November (2 116 deaths) which increased fourfold in December peaking at 8 833 deaths. This was the period during which South Africa was entering the second wave of the outbreak.

Figure 4.8: Number of COVID-19 deaths by month of death, 2020

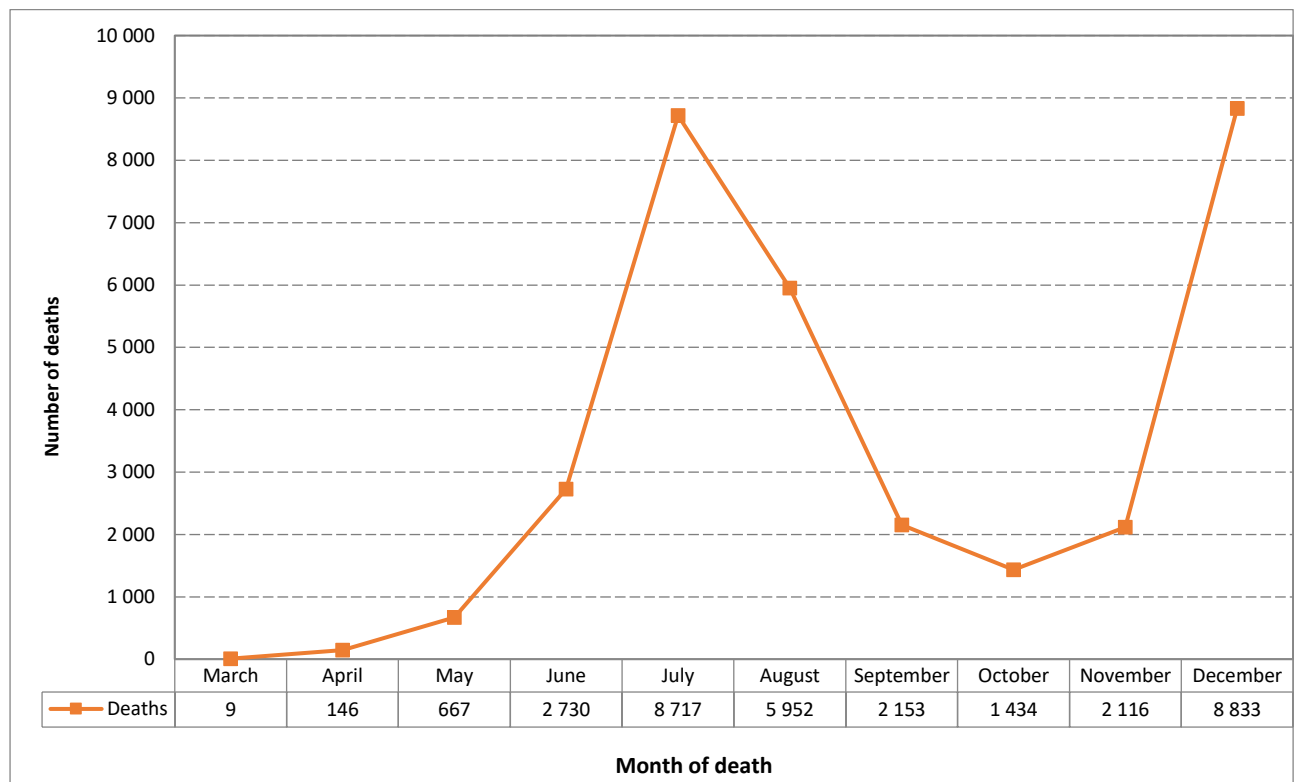


Table 4.17 shows the number and percentage distribution of COVID-19 deaths by province of death in 2020. It was observed that the majority of deaths occurred in Gauteng (23,1%), followed by Eastern Cape (22,4%), Western Cape (19,0%) and Kwa-Zulu Natal (18,6%). In the remaining five provinces, each province contributed less than 7,0%.

Table 4. 17: Number and percentage distribution of COVID-19 deaths by province of death, 2020

Province of death	Number of deaths	Percentage of deaths
Gauteng	7 575	23,1
Eastern Cape	7 324	22,4
Western Cape	6 209	19,0
Kwa-Zulu Natal	6 107	18,6
Free State	2 167	6,6
North West	1 019	3,1
Northern Cape	772	2,4
Limpopo	768	2,3
Mpumalanga	749	2,3
Unknown/unspecified	67	0,2
Total	32 757	100,0

5. Conclusion

This statistical release provides information on registered deaths for 2020 in South Africa based on data from the South African civil registration system maintained by the Department of Home Affairs (DHA). The report includes levels, trends and patterns in mortality and causes of deaths by demographic and geographic characteristics. The release further presents information on the leading underlying natural causes of death, patterns and trends in non-natural underlying causes of death. Deaths for the years 1997 to 2020 are also included to provide information on trends in the occurrence of deaths.

The results showed that the total number of deaths registered at the Department of Home Affairs and processed by Stats SA for deaths that occurred in 2020 were 489 744, which indicates a 5,3% increase from the 463 618 deaths that occurred in 2019. This is mainly attributed to COVID-19 deaths that occurred in 2020. Overall, mortality trends showed that mortality levels were declining in the country before COVID-19.

While the occurrence of deaths in the country continued to decline, it differed by age and sex. The age groups 60–64 and 65–69 had the highest proportion of deaths in 2020 at 9,6% and 9,5% respectively for males followed by age group 70–74 at 8,4%. The lowest proportions of deaths were observed in age groups 5–9 and 10–14 with each contributing less than 1% of the deaths which occurred in 2020. Differentials by sex and age shows that for both sexes, the proportion of deaths were high in infancy then declined, with the lowest at ages 5–9 and thereafter it starts to increase with more deaths as the age increases. Overall, from age 70 and older there were more female than male deaths.

Mortality differentials by province of death showed that the distribution of deaths by province of death followed the population distribution patterns of the country. The highest proportion of deaths occurrence in Gauteng (22,2%), followed by KwaZulu-Natal (19,3%) and then Eastern Cape (15,9%). While the lowest proportion of deaths occurred in Northern Cape (3,1%). Similarly, the population group differentials were reflective of the distribution of population groups in South Africa. Black Africans had the highest proportion of deaths (66,3%) in 2020, followed by the white population group at 9,4%.

Since 2009, the proportion of deaths due to non-natural causes had been on an increase from 8,7% in 2009 to 12,4% in 2019. However, for 2020, there was a notable decline to a low of 9,6%. This can be attributed to the fact that there was a sharp increase in the number of natural deaths due to a resurgence of COVID-19, which contributed to natural deaths, thus reducing the proportion of non-natural deaths for 2020. Non-natural causes of death by age show that the age group 20–24 was the age group mostly affected by non-natural causes of death.

The assessment of mortality from major disease factors, injuries and risk factors indicated that for the period 2010 to 2020, there were more deaths due to non-communicable diseases compared to communicable diseases. Differences by sex and age show that the proportion of deaths due to communicable diseases gradually declines with age from age 45 for males and age 40 for females. The proportion of deaths due to external causes of death was high for males compared to females for all age groups.

In 2020, five of the top ten leading underlying natural causes of death were non-communicable diseases, while the remainder were communicable diseases. COVID-19 (6,7%) was the leading underlying natural cause of death followed by diabetes mellitus with 6,6% deaths. This was the first time we have had COVID-19 as the underlying cause of death, and it immediately ascended to the first leading underlying cause of death. COVID-19 was the leading cause of death for males responsible for 6,4% of male deaths, while it ranked second for females, responsible for 7,0% of female deaths.

The top ten leading underlying causes of death were the same for both sexes though it differed greatly by proportion. Four of the ten leading underlying causes of death had the same rank for both sexes, namely *cerebrovascular diseases*, *other forms of heart diseases*, *influenza and pneumonia* and *other viral diseases* ranked fourth, fifth, seventh and tenth respectively.

By age differentials, *COVID-19* was the leading cause of death only for age group 45–64 responsible for 9,5% of the deaths in this age group. For age group 1–14, intestinal infectious diseases remained the leading cause of death, whereas *respiratory and cardiovascular disorders specific to the perinatal period* were the leading causes for infants, and *diabetes mellitus* for those aged 65 and older.

Leading causes of death by province show that COVID-19 was the leading cause of death for four provinces, namely Western Cape, Free State, Eastern Cape and Gauteng while the only province where it was not in the top ten underlying causes of death was in Limpopo. For the provinces Northern Cape and North West, hypertensive diseases were the leading underlying cause. For KwaZulu-Natal, Limpopo and Mpumalanga, diabetes mellitus was the leading underlying of death.

Statistics on mortality and causes of death are important for planning, monitoring and evaluation of interventions and programmes aimed at improving the health and survival of the population at large. Their usefulness may, however, be undermined if data are not of high quality. As such, efforts need to be made to enhance the completeness and quality of information. Addressing gaps in deaths data will go a long way towards providing quality death statistics to inform intervention programmes and projects. The data on causes of death is still of high quality and invaluable for the country.

6. References

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Appendices

Appendix A: Glossary

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.

COVID-19 a highly contagious infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)

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 in relation to a child, means the birth of a child born alive.

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.

Perinatal deaths are a combination of stillbirths and infants who die in the first week after birth (early neonatal deaths).

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 (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

Please refer to the Mortality and causes of death in South Africa: Findings from death notification, 2016 on pages 59–64 for copies of both the BI–1663 and DHA–1663 forms (Stats SA, 2018).

Appendix C: Assessment of the quality of data

The gold standard in mortality statistics is to have real-time data on the number of deaths and corresponding medically certified causes of death (WHO, 2013). However, the information needs to be of the highest quality in terms of completeness of death registration, timeliness of death registration and publication of death statistics, and accurateness of information provided embedded in deaths with correct information on characteristics of deceased, accurate causes of deaths and lower proportions of deaths with ill-defined or unspecified causes of deaths. In this regard, data quality confrontation has to be undertaken for improvements in mortality statistics to be realised. Improvements in quality of mortality data are essential in more effective policies and programmes concerning people's health and quality of life with the aim of leaving no one behind.

Completeness of death registration

The proportion of all deaths that occurred in a specific period and were covered by the civil registration of a country (referred to as completeness) was estimated at 96% for adult deaths (15 years and older) for the intercensal period 2011–2016. For 2020 adult death registration, the 96% completeness level is adopted. The completeness level for male adult deaths was estimated at 97% whereas for females it was slightly lower (95%). Revised estimates will be provided after the analysis of Census 2022 data. The methods used to derive the level of completeness for the intercensal period 2001–2007 and 2007–2011 were the Generalised Growth Balance (GGB) as proposed by Hill (1987), and the Synthetic Extinct Generation method (SEG) by Bennett and Horiuchi (1981, 1984). For the underlying assumptions and method followed, refer to Stats SA (2014). The extent of completeness of child deaths registration (0–14 years), however, is less certain, given the lack of completeness level estimates.

Timeliness of death registration

In South Africa, the Regulations for the Registration of Births and Deaths published in 2014 mandate that a death must be registered within 72 hours (3 days) of occurrence (Republic of South Africa, 2014). Timeliness in death registration indicates that all deaths are registered within the legally stipulated time allowance (UN, 2014). In general, timeliness of death registration refers to the interval between the date of death occurrence and the date it was registered with the Department of Home Affairs (DHA).

The number of days it took for deaths to be registered at DHA offices in 2020 is shown in Table C.1. For deaths that occurred in 2020, 18,8% were registered within a day of occurrence, 32,2% a day after the death had occurred, 17,9% on the second day after death occurrence and 12,1% on the third day. The proportion of deaths which were registered within the 72 hours (3 days) stipulated by the Regulations legislative framework was 80,0%. Strategies are needed to improve adherence to the legislative framework especially for the delayed deaths that did not reach Stats SA in time for the 2020 deaths processing phase.

Table C.1: Distribution of deaths by the number of days it took to register the death, 2020

Number of days	Number of deaths	Percentage	Cumulative percentage
Within a day of death	92 242	18,8	18,8
1 day	157 740	32,2	51,0
2 days	87 500	17,9	68,9
3 days	59 400	12,1	81,0
4 days	32 400	6,6	87,7
5 days	17 975	3,7	91,3
6 days	10 429	2,1	93,5
7–3 days	17 631	3,6	97,1
14–20 days	2 602	0,5	97,6
21–30 days	1 689	0,3	97,9
31–364 days	9 521	1,9	99,9
1 year+	615	0,1	100,0
Total	489 744	100,0	

Timeliness of publication of statistics

The United Nations (UN) recommends that a one-year time lapse from the end of the reference period to publication and dissemination of death statistics from the civil registration be maintained in order for vital statistics to be considered timely (UN, 2014). This statistical release fell short of this recommendation as it is published 72 months from the time the event occurred. Since civil registration deaths are continuously updated, the proportion of total registrations that are delayed or late provide an estimate of under-reporting in previous time periods.

Table C.2 shows the number of deaths published in the 2020 mortality and causes of death report for the years 1997 to 2020, and late or delayed death registrations processed during the processing of deaths registered in 2023/2024. The table shows that 4 683 additional death notification forms for deaths that occurred between 1997 and 2019 were processed during the 2023/2024 processing phase. In general, the years closer to the reference period have higher additional death notification forms, which in principle means that deaths become more complete over time. The majority (2 612) of the additional forms were for deaths that occurred in 2019. The distribution of deaths for 1997 to 2020 updated for late or delayed death notification forms is provided in Appendices D (1997–1999), D.1 to D8.

Table C.2: Number of deaths published in 2019 publication and late registrations processed during the 2023/2024 processing phase by year of death, 1997–2019

Year of death	Number of deaths published in 2019 publication	Additional forms received in the 2023/2024 processing phase	Total number of deaths
1997	318 153	26	318 179
1998	366 811	41	366 852
1999	382 884	28	382 912
2000	417 568	48	417 616
2001	456 616	33	456 649
2002	503 738	80	503 818
2003	558 829	29	558 858
2004	578 794	35	578 829
2005	599 986	34	600 020
2006	614 544	34	614 578
2007	606 586	19	606 605
2008	598 620	27	598 647
2009	584 414	33	584 447
2010	552 418	103	552 521
2011	519 109	140	519 249
2012	496 501	155	496 656
2013	478 270	47	478 317
2014	478 617	102	478 719
2015	475 853	84	475 937
2016	472 742	133	472 875
2017	466 879	455	467 334
2018	467 180	385	467 565
2019	461 006	2 612	463 618
Total	11 456 118	4 683	11 460 801

Data confrontation

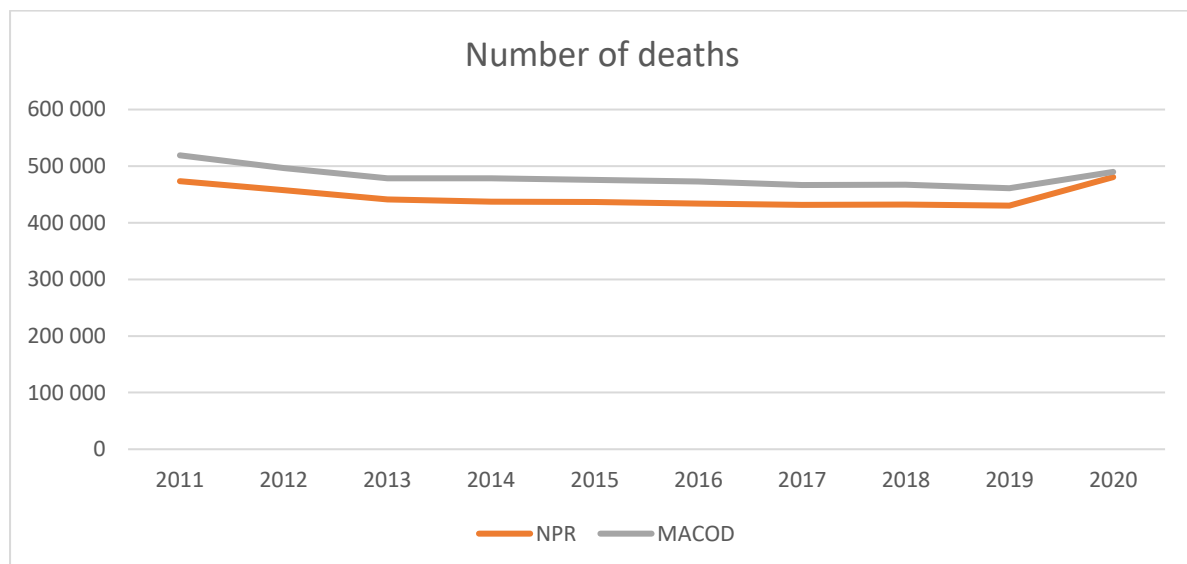
Figure C.1 presents the number of registered deaths processed by Stats SA and those recorded on the National Population Register (NPR) maintained by the DHA from 2011–2020. Comparing data from the two systems provides another means of evaluating the quality in terms of completeness of deaths from the civil registration system over time. Trends in the number of deaths from Stats SA and those from the DHA (NPR) follow a similar pattern over time, however, the numbers from Stats SA are always expected to be higher than those from the DHA (NPR). This is attributed to two reasons:

- The DHA (NPR) includes South African citizens and permanent residents whose birth records already exist on the DHA (NPR). In contrast, the number of deaths processed by Stats SA also includes deaths eligible to be included on the DHA (NPR), deaths of foreign citizens and South African citizens whose births were not registered on the DHA (NPR).

- Stats SA reports on all deaths registered at the DHA, but the number of deaths processed are less than the deaths that may have been registered at the DHA because they did not reach Stats SA in time for processing. Consequently, the magnitude of the difference between the two data sources may be affected by the delayed transmission of forms to Stats SA.

Figure C.1 shows that the number of deaths processed by Stats SA (MACOD) has been higher than that recorded on the DHA (NPR). The trend analysis reveals that both data sources had consistent decreases in the number of deaths for the period 2011–2006 and remained steady between 2014 and 2019. This was followed by a sharp increase from 461 006 in 2019 to 489 747 in 2020. These increases were reflecting for both sources. The high number of deaths processed by Stats SA as compared to the deaths recorded on the NPR is noticeable when processing late registrations.

Figure C 1: Number of deaths registered by source of data and year of death, 2011–2020



Quality of causes of death information

Quality information on underlying causes of death is critical to guide decision-making in public health. As such, it is important that this information is assessed from data processing through to the data analysis phase in order to measure the extent to which the data may be used for health policies and programmes. Table C.3 provides the assessment of the quality of causes of death data based on the number and percentage distribution of ill-defined causes by sex of the deceased. The ill-defined causes refer to diagnoses that are vague, non-specific and have insufficient details to be of value in promoting preventive and curative health interventions. Although ill-defined causes still help to provide the overall mortality due to broad diseases, they fail to provide a concise picture as they poorly attribute the underlying cause.

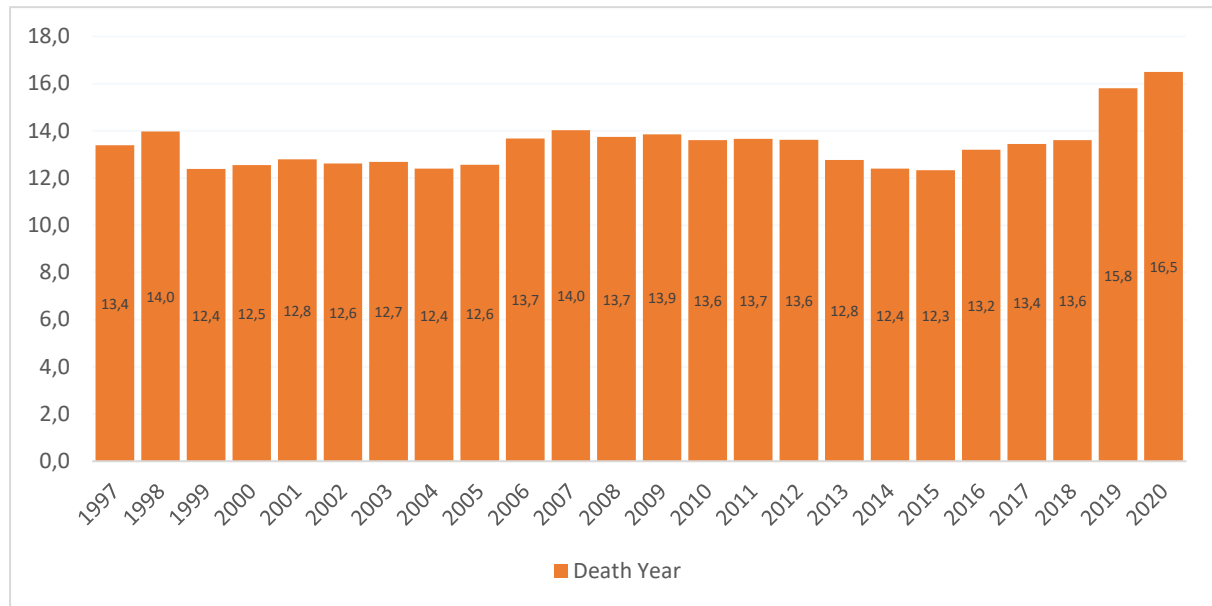
The results show that for both sexes the highest proportions of ill-defined causes were *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* (47,8%) followed by *essential (primary) hypertension* (14,7%) and then *cardiac arrest* (8,4%). About 2,0% of ill-defined causes were due to *event of undetermined intent* for both sexes, with much higher proportions for males (2,8%) than for females (1,3%).

Table C. 3: Number and percentage distribution of ill-defined causes of death by sex of the deceased, 2020

Underlying cause of death (based in ICD-10)	Number			Percentage		
	Male	Female	Both sexes	Male	Female	Both sexes
Streptococcal septicaemia (A40)	1	0	1	0,0	0,0	0,0
Other septicaemia (A41)	2 973	3 461	6 434	4,8	4,8	4,8
Malignant neoplasm of other and ill-defined sites (C76)	220	329	549	0,4	0,5	0,4
Malignant neoplasm without specification of site (C80)	1 624	1 802	3 426	2,6	2,5	2,6
Disseminated intravascular coagulation [defibrination syndrome] (D65)	48	79	127	0,1	0,1	0,1
Volume depletion (E86)	779	806	1 585	1,3	1,1	1,2
Essential (primary) hypertension (I10)	5 906	10 504	16 410	9,6	14,5	12,3
Heart failure (I50)	3 945	5 040	8 985	6,4	7,0	6,7
I51Complications and ill-defined descriptions of heart disease (I51)	545	519	1 064	0,9	0,7	0,8
Other and unspecified disorders of circulatory system (I99)	28	29	57	0,0	0,0	0,0
Pulmonary oedema (J81)	158	180	338	0,3	0,2	0,3
Respiratory failure, not elsewhere classified (J96)	1 650	1 646	3 296	2,7	2,3	2,5
Acute renal failure (N17)	519	490	1 009	0,8	0,7	0,8
Chronic renal failure (N18)	1 358	1 244	2 602	2,2	1,7	1,9
Unspecified renal failure (N19)	2 429	2 362	4 791	3,9	3,3	3,6
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99)	37 680	42 795	80 475	61,2	59,3	60,2
Event of undetermined intent (Y10-Y34)	1 657	916	2 573	2,7	1,3	1,9
Total of ill-defined	61 520	72 202	133 722	100,0	100,0	100,0

The high proportion of deaths classified under *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* (over 50%) is further analysed to review trends (1997–2020) in reporting this group. Figure C.2 shows that over the years 1997 to 2020, the percentage of deaths classified as ill-defined causes ranged between 12% and 16%. The highest proportion of deaths classified under *symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* was recorded in 2020 at 16,5%.

Figure C 2: Percentage distribution of deaths assigned to symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified and year of death 1997–2020*



*Data for 1997–2019 have been updated with late registrations/delayed death notification forms processed in 2023/2024.

Assessment framework for death registration data

This statistical release adopts the assessment framework proposed by Mahapatra et al. (2007) to assess the quality of the 2020 death registration data received from the civil registration system. The framework proposed two categories, namely general vital statistics and causes-of-death statistics. Both categories measure quality in terms of level of accuracy, relevance, comparability, timeliness and accessibility.

The results of the Mahapatra et al. 2007 assessment framework for the 2020 mortality and causes of death data from the South African civil registration system are shown in Table C.4 and Table C.5. Table C.4 shows the percentage of key variables with unknown or unspecified information and forms part of the accuracy criteria in the assessment framework for the year 2020. 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 while unspecified cases refer to missing data for that variable.

For the selected variables shown in table C.4 the variables that have been poorly reported before 2014 and have now been well reported over time (less than 1%) of deaths are age of deceased (0,01%), sex of deceased (0,4%) and province of death occurrence (0,3%). A notable increase in missing information was observed for province of usual residence from 2,0% in 2019 to 14,3% in 2020. The information on province of birth occurrence was not well reported as 26,8 of the variable had missing information. Missing information for marital status was 22,3% in 2020.

The 2020 results further indicate that 14,3% of the deaths had unknown or unspecified information on population group, up from 13,2% in 2019. This variable has been improving in the recent years considering that over the period 1997 to 2014 missing information on this variable was constant at around 25%.

In this release, no analyses were undertaken for all variables where almost more than half of the deaths had unknown or unspecified information. In 2020, education level (46,4%); occupation group (68,8%); industry (88,9%) and pregnancy status (76,0%) remained the four variables with almost half or more of the information classified as unknown or unspecified. However, a dataset containing unit records on mortality and causes of death 2020, which include variables not covered in this release due to poor reporting, is available on request from Stats SA.

Table C.4: Percentage of deaths classified as unknown/unspecified for selected variables, 2020

Variables	Applicable group	Percentage unknown or unspecified
Sex	All	0,4
Age	All	0,0
Province of death occurrence	All	0,2
Province of usual residence of deceased	All	14,3
Province of birth	All	30,0
Population group	All	14,3
Place or institution of death occurrence	All	28,5
Method used to ascertain cause of death	All	34,9
Marital Status	All	22,3
Smoking status	Aged 16 and older	36,4
Education	Aged 6 and older	46,4
Occupation	Aged 15 and older	68,8
Industry	Aged 15 and older (economically active)	88,9
Pregnancy status	Females aged 10–55	76,0

In addition, for the accuracy dimension, Table C.5 indicates that 96% of adult (15 years and older) death registrations were reported for the 2011–2016 intercensal period. The table also shows that the relevance and comparability of general vital statistics is regarded as complete.

The table further shows that for causes-of-death-statistics, about half (44,6%) of the 2020 deaths occurred within a health care facility. This approximates the percentage of deaths whose causes are more likely to be detailed enough for the underlying cause to be derived. Cause-of-death-statistics are regarded as completely relevant as they are based on routine tabulations by sex and five-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. The tools used in coding causes of death (International Classification of Diseases 10th revision) for 2020 and the variables analysed were similar to those in previous years. Therefore, comparability over time and with other countries is also regarded as complete.

The 2020 deaths show that 12,4% of all deaths were assigned to ill-defined causes. Mahapatra et al. (2007) propose that at most 10% of cause-of-death statistics should be assigned to symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified categories. Ill-defined underlying causes slightly worsened in 2020 to 16,5% from 15,8% in 2019. This remains a cause for concern and requires urgent attention.

The table further shows that processing 2020 data on causes of death took 36 months and the mean time from the end of the reference period to publication was 72 months. This was due to backlog introduced by COVID-19 where there was no capturing taking place for almost 6 months and upon return there was a huge number of forms to be processed. Shorter processing time ensures that the mean time from the end of the reference period to publication is reduced, which in turn improves timeliness. Stats SA has introduced auto coding on the processing phase which is aimed at reducing both the mean time period and processing time.

In terms of meeting user needs, there is wide accessibility to the statistical release and datasets published on mortality and causes of death. The data published on this release are available in a wide range of formats and can be accessed through the Stats SA website and also by making use of Stats SA User Information Services.

Table C.5: Assessment of the 2020 South African death statistics from the civil registration system using the framework proposed by Mahapatra et al. (2007)

General vital statistics		Cause-of-death statistics	
Criteria and indicators	Measure	Criteria and indicators	Measure
Accuracy Completeness of death registration	96%	Accuracy Proportion of deaths that occurred in healthcare facilities	44,6%
Missing data See Table 2.5		Proportion of deaths assigned to symptoms and signs of disease not elsewhere classified	16,5%
Relevance Routine tabulations by sex and 5-year age groups	100%	Relevance Routine tabulation by sex and 5-year age groups	100%
Deaths in children under five years tabulated by 0 and 1-4-year age group	100%	Number of cause-of-death tabulation areas	9 provinces and 52 district municipalities
Comparability Stability of key definitions over time	100%	Comparability Consistency of cause-specific mortality proportions over consecutive years	
Uniformity of definitions across areas	100%	ICD coding for certification and coding of causes of death, revision used and code level to which tabulations are published	100% Coding causes of death using the tenth revision at 4/5-digit level
Timeliness Processing time	36 months		
Mean time from end of reference period to publication	72 months		
Accessibility Media - number of formats in which data are released	Two: website and compact discs		
Metadata	Published on the web and with compact disc and available on request		
Availability of user service	Email: info@statssa.gov.za / Tel: 012 310 8600 / Fax (012) 310 8500 / 8495		

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

Age	Year of death											
	1997				1998				1999			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	12 997	11 553	203	24 753	14 937	13 266	314	28 517	14 741	13 463	438	28 642
1–4	4 056	3 653	52	7 761	4 865	4 494	96	9 455	5 073	4 642	99	9 814
5–9	1 708	1 256	17	2 981	1 780	1 438	36	3 254	1 902	1 512	34	3 448
10–14	1 548	1 195	20	2 763	1 698	1 288	23	3 009	1 651	1 306	23	2 980
15–19	3 779	2 485	24	6 288	4 111	2 916	63	7 090	4 357	3 338	89	7 784
20–24	8 190	5 475	54	13 719	8 803	6 937	113	15 853	8 656	8 316	108	17 080
25–29	10 943	7 479	44	18 466	13 102	9 905	113	23 120	13 914	12 687	142	26 743
30–34	11 866	7 221	52	19 139	14 404	9 769	130	24 303	16 332	12 323	122	28 777
35–39	12 021	6 903	52	18 976	14 647	8 967	99	23 713	16 495	10 863	111	27 469
40–44	11 834	6 436	37	18 307	13 981	7 959	95	22 035	15 256	8 958	92	24 306
45–49	12 274	6 394	52	18 720	14 233	7 704	91	22 028	15 024	8 552	103	23 679
50–54	11 345	6 264	31	17 640	13 043	7 231	79	20 353	13 921	7 783	82	21 786
55–59	12 697	7 948	47	20 692	13 976	8 893	108	22 977	14 105	8 701	85	22 891
60–64	11 225	9 308	51	20 584	12 454	10 008	60	22 522	12 711	10 062	85	22 858
65–69	12 506	11 062	49	23 617	13 270	12 472	85	25 827	12 856	12 326	92	25 274
70–74	11 315	10 073	51	21 439	12 754	11 805	53	24 612	12 874	12 263	71	25 208
75–79	11 228	12 348	46	23 622	11 438	12 488	87	24 013	10 711	11 593	63	22 367
80–84	6 615	8 787	34	15 436	7 888	11 048	49	18 985	7 610	11 326	73	19 009
85–89	3 960	6 922	27	10 909	4 262	7 808	35	12 105	4 453	7 947	53	12 453
90+	2 032	4 733	13	6 778	2 364	5 568	29	7 961	2 211	5 385	30	7 626
Unspecified	3 116	2 366	106	5 588	2 822	2 102	196	5 120	1 493	1 112	114	2 719
Total	177 255	139 861	1 062	318 178	200 832	164 066	1 954	366 852	206 346	174 458	2 109	382 913

Appendix D1: Number of deaths by age, sex and year of death, 2000–2002

Age	Year of death											
	2000				2001				2002			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	15 023	13 539	353	28 915	15 499	14 085	307	29 891	17 902	16 224	341	34 467
1–4	5 393	4 937	86	10 416	5 901	5 317	78	11 296	6 331	5 704	87	12 122
5–9	1 999	1 600	29	3 628	2 127	1 710	29	3 866	2 407	1 967	17	4 391
10–14	1 725	1 340	36	3 101	1 753	1 472	22	3 247	1 875	1 492	24	3 391
15–19	4 327	3 499	73	7 899	4 484	3 925	63	8 472	4 745	4 300	60	9 105
20–24	8 892	9 932	88	18 912	8 957	10 995	87	20 039	9 591	12 549	114	22 254
25–29	15 111	15 794	108	31 013	16 895	19 391	115	36 401	18 678	23 428	137	42 243
30–34	18 538	15 873	116	34 527	20 960	18 812	112	39 884	23 948	23 618	155	47 721
35–39	18 596	13 669	99	32 364	21 152	15 927	101	37 180	24 152	19 525	129	43 806
40–44	17 205	11 073	86	28 364	19 417	12 935	98	32 450	21 655	15 557	118	37 330
45–49	16 168	9 596	80	25 844	17 987	10 974	64	29 025	19 349	12 712	113	32 174
50–54	15 332	9 125	67	24 524	16 960	10 180	74	27 214	18 680	11 275	103	30 058
55–59	13 989	8 891	76	22 956	14 624	9 145	66	23 835	15 456	10 035	72	25 563
60–64	14 282	11 271	70	25 623	15 154	12 088	69	27 311	16 225	12 731	82	29 038
65–69	12 615	12 079	53	24 747	13 044	12 827	65	25 936	13 771	13 306	65	27 142
70–74	13 139	14 159	68	27 366	14 080	15 150	60	29 290	13 817	15 490	62	29 369
75–79	10 360	11 550	48	21 958	10 873	12 061	61	22 995	11 116	12 847	73	24 036
80–84	8 499	12 650	32	21 181	9 175	13 933	47	23 155	9 558	14 209	60	23 827
85–89	4 683	8 234	27	12 944	4 587	8 374	31	12 992	4 381	8 320	34	12 735
90+	2 532	6 535	31	9 098	3 027	7 168	28	10 223	3 296	7 670	33	10 999
Unspecified	1 192	897	147	2 236	1 054	792	101	1 947	1 139	791	117	2 047
Total	219 600	196 243	1 773	417 616	237 710	217 261	1 678	456 649	258 072	243 750	1 996	503 818

Appendix D2: Number of deaths by age, sex and year of death, 2003–2005

Age	Year of death											
	2003				2004				2005			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	19 980	18 072	435	38 487	21 812	19 231	533	41 576	24 099	21 983	476	46 558
1–4	7 160	6 297	79	13 536	8 287	7 647	72	16 006	8 246	7 338	80	15 664
5–9	2 784	2 210	28	5 022	3 193	2 805	13	6 011	3 373	2 808	21	6 202
10–14	2 004	1 645	25	3 674	2 142	1 781	14	3 937	2 154	1 862	17	4 033
15–19	4 846	4 574	70	9 490	4 691	4 629	42	9 362	4 782	4 557	53	9 392
20–24	10 362	14 239	106	24 707	10 387	15 149	78	25 614	10 504	14 936	92	25 532
25–29	20 072	26 341	156	46 569	19 848	27 660	115	47 623	19 355	27 346	111	46 812
30–34	27 564	28 235	145	55 944	28 512	30 737	82	59 331	28 852	31 366	109	60 327
35–39	26 497	22 739	115	49 351	28 276	25 238	90	53 604	29 468	26 334	101	55 903
40–44	24 814	18 488	125	43 427	26 543	20 629	72	47 244	27 532	21 527	87	49 146
45–49	22 108	14 512	91	36 711	23 150	16 296	70	39 516	24 499	17 425	81	42 005
50–54	20 655	12 910	68	33 633	21 163	14 124	47	35 334	21 560	14 996	59	36 615
55–59	17 246	11 007	49	28 302	18 108	12 046	33	30 187	19 750	13 329	47	33 126
60–64	17 432	13 326	58	30 816	17 002	13 420	31	30 453	16 875	13 263	34	30 172
65–69	14 691	13 898	53	28 642	15 233	13 818	26	29 077	16 391	15 206	38	31 635
70–74	14 495	16 403	58	30 956	13 460	15 439	26	28 925	12 921	15 098	35	28 054
75–79	12 085	14 136	56	26 277	11 825	14 094	16	25 935	12 238	15 937	35	28 210
80–84	9 462	13 711	39	23 212	8 656	11 970	21	20 647	8 449	11 851	21	20 321
85–89	5 440	10 207	37	15 684	5 043	9 480	19	14 542	5 457	10 354	17	15 828
90+	3 382	8 160	18	11 560	3 292	7 485	14	10 791	3 292	7 889	15	11 196
Unspecified	1 683	960	215	2 858	1 937	931	246	3 114	1 979	1 084	226	3 289
Total	284 762	272 070	2 026	558 858	292 560	284 609	1 660	578 829	301 776	296 489	1 755	600 020

Appendix D3: Number of deaths by age, sex and year of death, 2006–2008

Age	Year of death											
	2006				2007				2008			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	25 563	22 156	726	48 445	24 921	21 762	415	47 098	24 185	21 484	301	45 970
1–4	8 410	7 606	118	16 134	7 862	7 071	47	14 980	8 248	7 234	31	15 513
5–9	3 034	2 555	17	5 606	2 885	2 510	4	5 399	2 746	2 313	7	5 066
10–14	2 388	1 921	15	4 324	2 253	1 913	2	4 168	2 238	1 895	2	4 135
15–19	4 856	4 609	40	9 505	4 901	4 228	16	9 145	4 872	4 150	27	9 049
20–24	10 883	14 854	100	25 837	10 955	13 825	53	24 833	10 757	12 978	45	23 780
25–29	19 046	26 267	86	45 399	18 573	24 698	72	43 343	18 534	23 674	48	42 256
30–34	28 933	31 125	95	60 153	28 477	29 272	69	57 818	26 929	27 419	58	54 406
35–39	29 545	26 187	80	55 812	29 511	24 990	50	54 551	29 252	24 519	48	53 819
40–44	28 182	21 929	79	50 190	27 203	21 310	49	48 562	26 211	20 334	32	46 577
45–49	25 209	18 006	45	43 260	24 976	17 988	43	43 007	24 937	17 657	31	42 625
50–54	22 849	15 647	43	38 539	22 989	15 701	17	38 707	22 863	15 640	21	38 524
55–59	20 697	14 207	43	34 947	21 505	14 674	24	36 203	21 705	15 016	22	36 743
60–64	17 092	13 363	28	30 483	17 545	13 524	11	31 080	17 824	13 965	17	31 806
65–69	17 781	15 839	25	33 645	18 015	15 887	9	33 911	18 134	15 668	12	33 814
70–74	13 613	15 619	28	29 260	13 864	15 884	8	29 756	14 208	15 371	2	29 581
75–79	12 750	17 036	25	29 811	12 624	17 112	4	29 740	12 630	17 259	4	29 893
80–84	8 962	12 359	21	21 342	8 930	12 953	4	21 887	9 072	13 901	2	22 975
85–89	6 158	12 040	12	18 210	6 378	12 231	2	18 611	6 009	11 234	1	17 244
90+	3 568	8 723	9	12 300	3 689	8 802	12	12 503	4 003	9 582	27	13 612
Unspecified	871	358	147	1 376	840	350	113	1 303	814	279	166	1 259
Total	310 390	302 406	1 782	614 578	308 896	296 685	1 024	606 605	306 171	291 572	904	598 647

Appendix D4: Number of deaths by age, sex and year of death, 2009–2011

Age	Year of death											
	2009				2010				2011			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	21 124	17 820	467	39 411	18 394	16 175	386	34 955	15 095	13 385	510	28 990
1–4	6 705	6 130	31	12 866	7 072	6 145	44	13 261	5 377	4 810	47	10 234
5–9	2 375	2 051	6	4 432	2 576	2 132	5	4 713	2 387	2 061	9	4 457
10–14	2 396	2 077	4	4 477	2 456	2 137	3	4 596	2 113	1 821	6	3 940
15–19	4 682	4 157	25	8 864	4 444	3 988	18	8 450	4 171	3 592	26	7 789
20–24	10 025	11 881	57	21 963	9 483	10 766	37	20 286	8 686	8 989	84	17 759
25–29	17 811	21 792	72	39 675	16 568	19 593	64	36 225	15 104	16 301	153	31 558
30–34	25 091	24 293	81	49 465	22 516	21 535	74	44 125	19 813	17 964	147	37 924
35–39	27 763	22 472	59	50 294	24 879	20 481	52	45 412	22 677	17 639	117	40 433
40–44	25 240	19 257	55	44 552	23 435	17 734	47	41 216	21 110	15 641	100	36 851
45–49	24 420	17 420	47	41 887	23 021	16 453	58	39 532	21 159	15 067	68	36 294
50–54	22 911	15 643	40	38 594	22 091	15 301	33	37 425	21 314	14 519	74	35 907
55–59	21 860	15 168	29	37 057	21 040	14 399	35	35 474	20 585	14 381	54	35 020
60–64	19 273	14 439	21	33 733	20 172	14 874	30	35 076	20 599	15 136	61	35 796
65–69	18 274	15 770	16	34 060	17 354	14 661	21	32 036	17 135	14 405	26	31 566
70–74	15 209	15 999	18	31 226	15 898	16 768	15	32 681	16 672	16 998	22	33 692
75–79	12 772	17 838	9	30 619	11 817	16 195	8	28 020	11 800	16 624	18	28 442
80–84	9 815	15 176	9	25 000	9 962	16 273	11	26 246	10 041	16 861	15	26 917
85–89	6 171	11 256	2	17 429	5 788	10 533	5	16 326	6 037	11 251	13	17 301
90+	5 260	11 691	1	16 952	4 095	10 761	10	14 866	4 410	11 471	7	15 888
Unspecified	1 285	393	213	1 891	1 009	265	326	1 600	1 300	594	597	2 491
Total	300 462	282 723	1 262	584 447	284 070	267 169	1 282	552 521	267 585	249 510	2 154	519 249

Appendix D5: Number of deaths by age, sex and year of death, 2012–2014

Age	Year of death											
	2012				2013				2014			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	14 388	12 384	528	27 300	14 073	12 317	519	26 909	14 215	12 230	542	26 987
1–4	5 656	5 019	49	10 724	5 017	4 359	67	9 443	4 796	4 108	64	8 968
5–9	2 682	2 263	7	4 952	1 947	1 602	13	3 562	1 876	1 444	10	3 330
10–14	2 264	1 914	4	4 182	1 863	1 541	6	3 410	1 818	1 439	8	3 265
15–19	4 139	3 439	20	7 598	4 256	3 115	31	7 402	4 224	3 165	21	7 410
20–24	8 497	7 892	86	16 475	8 470	7 119	70	15 659	8 514	6 288	80	14 882
25–29	14 717	14 332	126	29 175	13 770	12 379	140	26 289	13 263	11 107	177	24 547
30–34	18 244	16 240	157	34 641	17 502	14 490	155	32 147	17 400	13 810	171	31 381
35–39	20 838	15 821	120	36 779	19 057	14 086	134	33 277	18 061	13 156	156	31 373
40–44	19 883	14 180	96	34 159	19 148	13 443	117	32 708	18 561	12 820	114	31 495
45–49	19 416	13 763	87	33 266	18 372	13 037	79	31 488	17 869	12 662	79	30 610
50–54	20 022	13 838	73	33 933	19 420	13 517	75	33 012	19 470	13 531	73	33 074
55–59	20 140	13 611	52	33 803	19 567	13 569	53	33 189	19 722	14 018	62	33 802
60–64	20 324	14 537	30	34 891	20 486	14 798	50	35 334	21 146	15 556	42	36 744
65–69	17 137	13 988	24	31 149	16 933	14 192	33	31 158	18 463	15 182	22	33 667
70–74	16 347	16 492	15	32 854	16 397	16 605	19	33 021	16 243	16 807	17	33 067
75–79	12 105	16 434	18	28 557	12 398	16 084	24	28 506	13 027	16 624	21	29 672
80–84	10 039	16 829	11	26 879	9 761	16 883	17	26 661	9 767	17 250	18	27 035
85–89	5 830	11 196	11	17 037	6 038	11 929	13	17 980	6 541	13 111	10	19 662
90+	4 327	11 074	8	15 409	4 172	11 044	12	15 228	4 340	11 915	4	16 259
Unspecified	1 498	737	658	2 893	1 023	427	484	1 934	798	239	452	1 489
Total	258 493	235 983	2 180	496 656	249 670	226 536	2 111	478 317	250 114	226 462	2 143	478 719

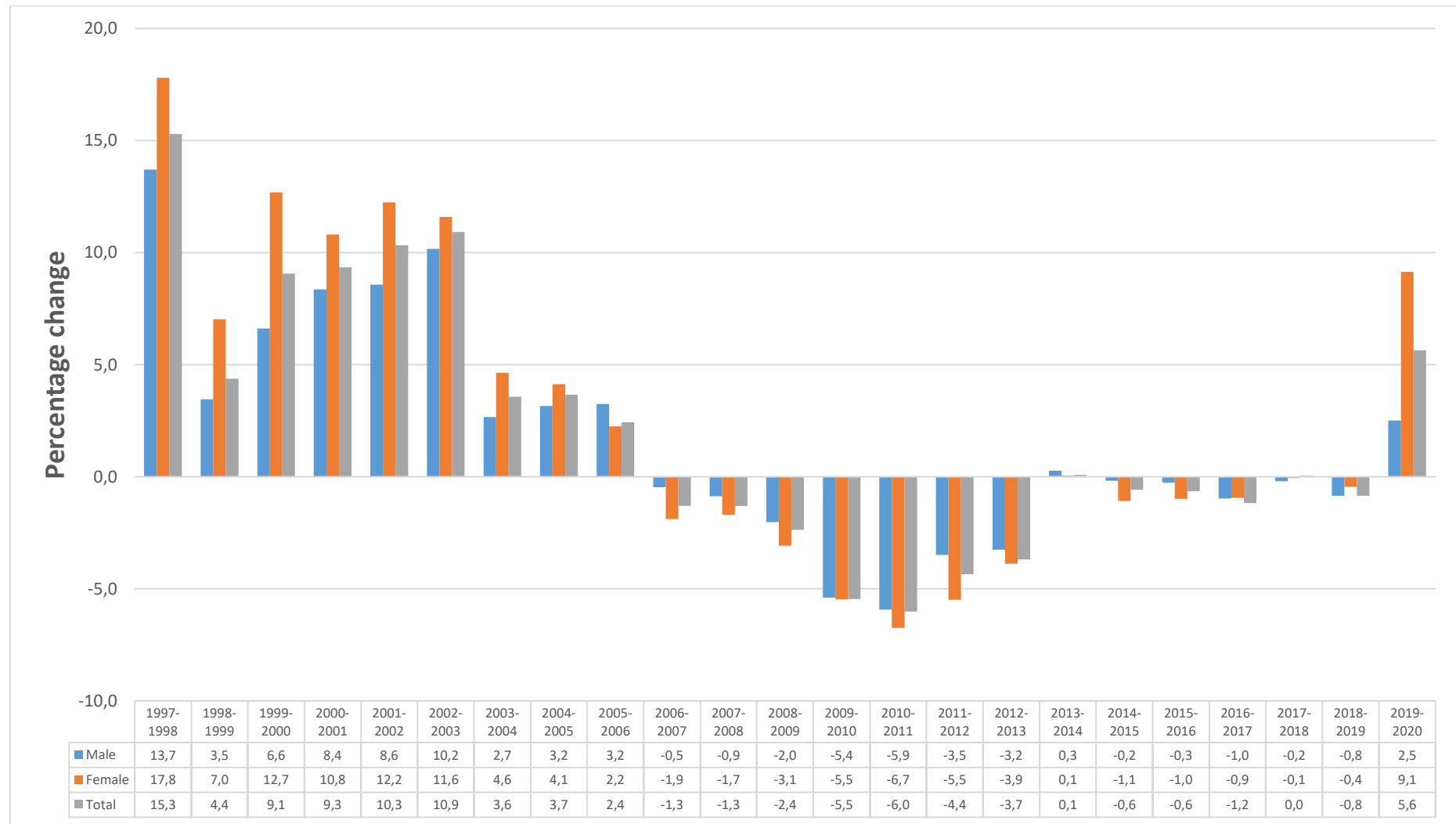
Appendix D6: Number of deaths by age, sex and year of death, 2015–2017

Age	Year of death											
	2015				2016				2017			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	13 110	11 502	600	25 212	11 776	9 900	418	22 094	11 267	9 653	103	21 023
1–4	4 252	3 674	44	7 970	3 820	3 410	43	7 273	3 340	2 990	12	6 342
5–9	1 836	1 384	10	3 230	1 741	1 340	6	3 087	1 568	1 159	1	2 728
10–14	1 769	1 413	9	3 191	1 830	1 344	4	3 178	1 738	1 282	2	3 022
15–19	4 179	2 912	14	7 105	4 178	2 869	21	7 068	4 075	2 822	4	6 901
20–24	8 616	5 881	83	14 580	8 644	5 572	61	14 277	8 637	5 142	12	13 791
25–29	13 446	10 211	135	23 792	13 428	9 556	127	23 111	13 316	8 557	15	21 888
30–34	16 803	12 827	182	29 812	17 377	12 162	155	29 694	17 093	11 886	31	29 010
35–39	17 681	12 565	158	30 404	17 181	11 892	159	29 232	16 992	11 704	23	28 719
40–44	18 153	12 404	133	30 690	17 859	12 259	123	30 241	17 306	11 922	17	29 245
45–49	17 652	12 415	100	30 167	17 464	11 999	91	29 554	17 050	12 042	16	29 108
50–54	19 378	13 444	72	32 894	19 025	13 474	56	32 555	18 404	13 043	12	31 459
55–59	20 515	14 381	57	34 953	20 380	14 472	67	34 919	20 074	14 657	12	34 743
60–64	21 347	15 693	42	37 082	21 310	16 104	52	37 466	21 326	16 391	8	37 725
65–69	19 510	16 092	27	35 629	20 045	16 572	33	36 650	20 688	17 129	3	37 820
70–74	16 332	16 101	20	32 453	16 215	16 036	34	32 285	16 490	16 178	5	32 673
75–79	13 790	18 075	16	31 881	14 767	18 346	21	33 134	14 908	18 422	1	33 331
80–84	9 417	16 448	17	25 882	9 565	16 522	12	26 099	9 778	16 433	1	26 212
85–89	6 706	14 230	9	20 945	6 949	14 940	19	21 908	6 862	14 834	2	21 698
90+	4 380	12 120	13	16 513	4 655	12 807	15	17 477	4 892	13 240	3	18 135
Unspecified	850	235	467	1 552	959	251	363	1 573	1 132	240	389	1 761
Total	249 722	224 007	2 208	475 937	249 168	221 827	1 880	472 875	246 936	219 726	672	467 334

Appendix D7: Number of deaths by age, sex and year of death, 2018–2020

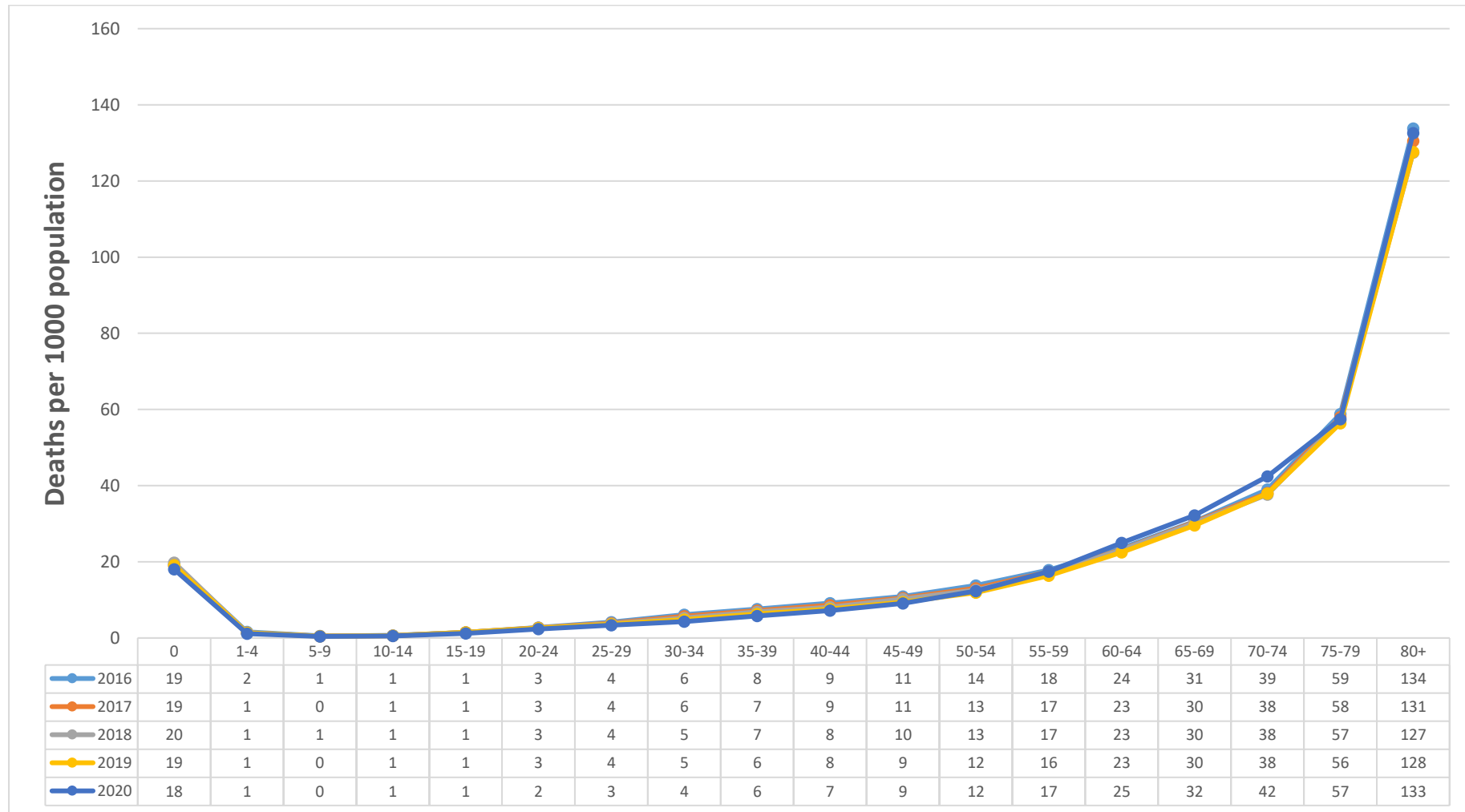
Age	Year of death											
	2018				2019				2020			
	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total	Male	Female	Unspecified	Total
0	11 693	9 911	290	21 894	11 350	9 778	420	21 548	10 814	9 058	323	20 222
1–4	3 455	2 889	33	6 377	3 304	2 777	50	6 131	2 665	2 367	39	5 071
5–9	1 606	1 251	9	2 866	1 533	1 174	16	2 723	1 333	1 004	9	2 346
10–14	1 879	1 430	6	3 315	1 829	1 355	8	3 192	1 599	1 225	10	2 834
15–19	4 021	2 761	24	6 806	4 002	2 716	25	6 743	3 327	2 406	30	5 763
20–24	8 315	4 924	64	13 303	8 376	4 505	81	12 962	7 124	4 167	97	11 388
25–29	12 810	8 091	117	21 018	12 712	7 503	160	20 375	11 218	6 928	143	18 289
30–34	16 488	10 940	168	27 594	15 820	10 167	196	26 183	14 424	9 559	201	24 184
35–39	16 893	11 670	159	28 722	16 689	11 187	209	28 085	16 382	11 224	274	27 880
40–44	16 677	11 220	123	28 020	15 858	10 981	171	27 010	15 497	11 052	235	26 784
45–49	17 176	11 885	101	29 162	16 245	11 498	135	27 878	16 243	12 306	152	28 701
50–54	17 867	12 851	83	30 801	17 173	12 356	94	29 623	17 630	13 887	130	31 647
55–59	20 388	14 679	64	35 131	19 839	14 714	85	34 638	21 158	17 277	83	38 518
60–64	21 791	16 676	80	38 547	21 659	16 878	81	38 618	24 025	20 795	81	44 901
65–69	21 058	17 782	62	38 902	21 124	18 137	53	39 314	23 568	21 688	70	45 326
70–74	16 790	16 791	48	33 629	17 826	17 561	51	35 438	20 930	21 782	46	42 758
75–79	14 908	18 549	44	33 501	15 178	18 618	29	33 825	16 265	20 280	46	36 591
80–84	10 043	16 838	41	26 922	10 668	17 366	21	28 055	12 562	19 970	28	32 560
85–89	6 754	14 896	29	21 679	6 853	15 034	21	21 908	7 100	15 640	19	22 759
90+	4 699	13 326	21	18 046	5 188	14 087	20	19 295	5 468	15 735	19	21 222
Unspecified	796	157	377	1 330	36	19	19	74	0	0	0	0
Total	246 107	219 517	1 941	467 565	243 262	218 411	1 945	463 618	249 332	238 350	2 062	489 744

Appendix E- Year-to-year percentage changes in number of deaths by sex, 1997–2020*



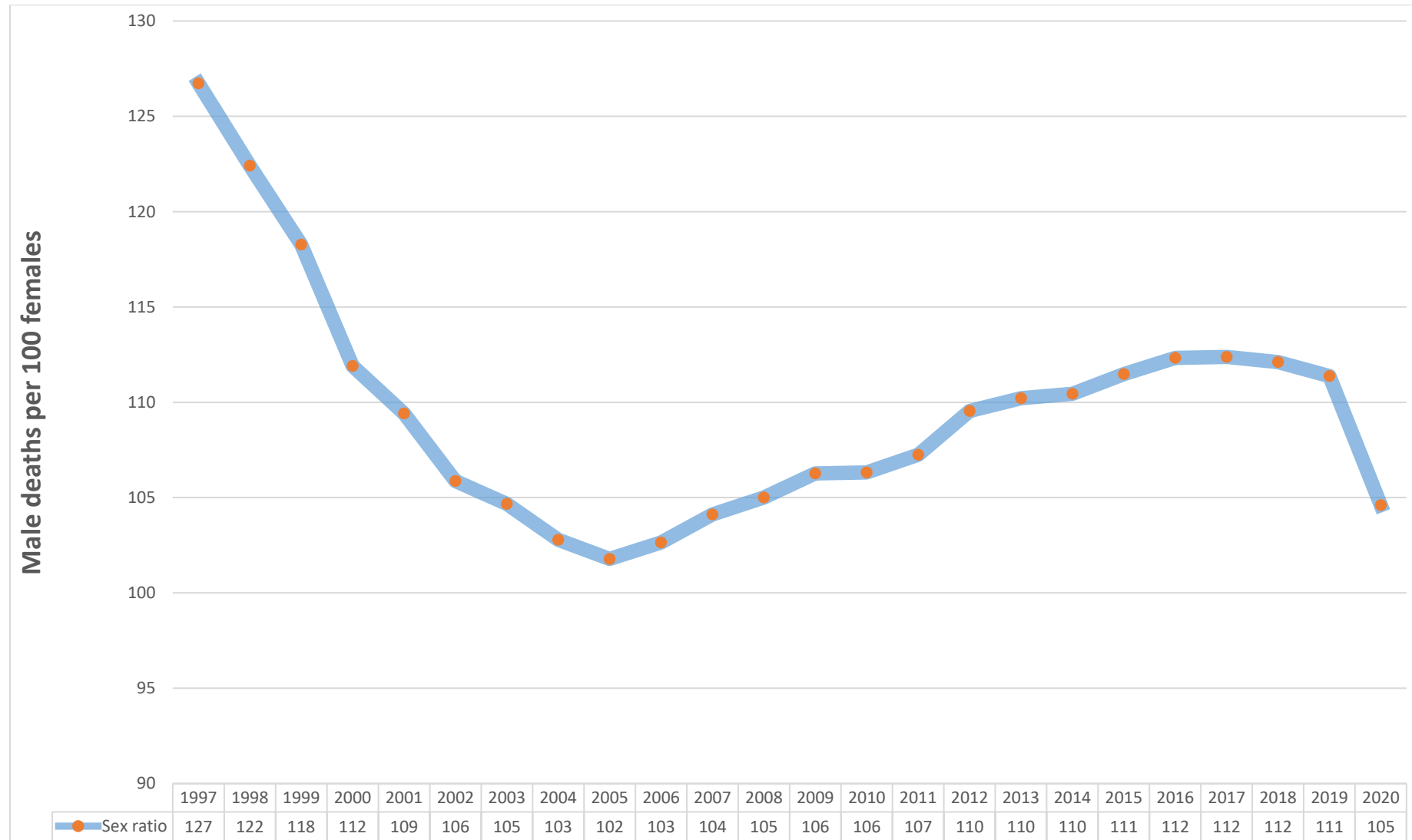
*Data for 1997–2019 have been updated with late registrations/delayed death notification forms processed in 2023/24.

Appendix F- Age-specific death rates (ASDR) by year of death, 2016–2020*



*Data for 1997–2019 have been updated with late registrations/delayed death notification forms processed in 2023/24.

Appendix G- Sex ratios at death by year of death, 1998–2020



*Data for 1997–2019 have been updated with late registrations/delayed death notification forms processed in 2023/24.

Appendix H: Number of deaths by province of death occurrence and province of usual residence of the deceased, 2020

Province of death	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	Total
Western Cape	51 592	544	136	80	1 439	24	475	204	1 150	55 644
Eastern Cape	1 490	71 334	170	229	1 254	81	1 752	862	869	78 041
Northern Cape	172	89	12 960	213	44	549	82	680	173	14 962
Free State	73	224	163	29 064	119	381	1 210	103	464	31 801
KwaZulu-Natal	136	1 177	39	185	89 101	115	2 081	295	1 453	94 582
North West	41	52	209	289	92	28 545	759	50	508	30 545
Gauteng	1 827	346	49	543	687	2 547	98 103	1 600	3 229	108 931
Mpumalanga	37	86	254	48	327	45	743	27 160	1 165	29 865
Limpopo	31	117	16	587	65	534	642	704	41 719	44 415
Unknown/unspecified	89	48	5	46	59	47	235	48	381	958
Total	55 488	74 017	14 001	31 284	93 187	32 868	106 082	31 706	51 111	489 744

Appendix H1: Percentage distribution of deaths by province of death occurrence and province of usual residence of the deceased, 2020

Province of death	Western Cape	Eastern Cape	Northern Cape	Free State	KwaZulu-Natal	North West	Gauteng	Mpumalanga	Limpopo	Total
Western Cape	92,7	1,0	0,2	0,1	2,6	0,0	0,9	0,4	2,1	100,0
Eastern Cape	1,9	91,4	0,2	0,3	1,6	0,1	2,2	1,1	1,1	100,0
Northern Cape	1,1	0,6	86,6	1,4	0,3	3,7	0,5	4,5	1,2	100,0
Free State	0,2	0,7	0,5	91,4	0,4	1,2	3,8	0,3	1,5	100,0
KwaZulu-Natal	0,1	1,2	0,0	0,2	94,2	0,1	2,2	0,3	1,5	100,0
North West	0,1	0,2	0,7	0,9	0,3	93,5	2,5	0,2	1,7	100,0
Gauteng	1,7	0,3	0,0	0,5	0,6	2,3	90,1	1,5	3,0	100,0
Mpumalanga	0,1	0,3	0,9	0,2	1,1	0,2	2,5	90,9	3,9	100,0
Limpopo	0,1	0,3	0,0	1,3	0,1	1,2	1,4	1,6	93,9	100,0
Unknown/unspecified	9,3	5,0	0,5	4,8	6,2	4,9	24,5	5,0	39,8	100,0

Appendix I: Number of deaths by age, province and district municipality of death occurrence, 2020

Province of death Occurrence	District Municipality of death Occurrence	Age					Total
		0	1–14	15–44	45–64	65+	
Western Cape	Cape Winelands	175	80	1 085	1 934	2 394	5 668
	Central Karoo	4	0	38	69	73	184
	City of Cape Town	1 010	344	6 906	9 782	14 569	32 611
	Garden Route	35	21	342	638	898	1 934
	Overberg	51	23	359	582	1 013	2 028
	West Coast	99	45	682	1 362	1 870	4 058
	Unspecified	183	116	2 193	2 928	3 741	9 161
	Total	1 557	629	11 605	17 295	24 558	55 644
Eastern Cape	Alfred Nzo	148	208	1 714	1 685	2 939	6 694
	Amathole	123	132	1 508	2 357	3 744	7 864
	Buffalo City	171	137	1 850	3 016	4 046	9 220
	Chris Hani	202	149	1 982	3 212	4 747	10 292
	Joe Gqabi	127	63	779	994	1 446	3 409
	Nelson Mandela Bay	318	195	3 398	5 400	6 656	15 967
	O.R.Tambo	325	420	3 602	3 488	5 321	13 156
	Sarah Baartman	98	53	956	1 693	2 216	5 016
	Unspecified	153	110	1 540	1 886	2 734	6 423
	Total	1 665	1 467	17 329	23 731	33 849	78 041
Northern Cape	Frances Baard	219	128	1 207	1 752	2 015	5 321
	John Taolo Gaetsewe	219	94	721	764	866	2 664
	Namakwa	74	26	285	495	641	1 521
	Pixley ka Seme	100	40	508	798	777	2 223
	Z F Mgcawu	110	72	692	934	958	2 766
	Unspecified	36	6	95	153	177	467
	Total	758	366	3 508	4 896	5 434	14 962
Free State	Fezile Dabi	209	78	1 080	1 520	2 180	5 067
	Lejweleputswa	379	135	1 575	2 251	2 589	6 929
	Mangaung	355	165	1 924	2 748	3 628	8 820
	Thabo Mofutsanyane	424	173	1 977	2 399	3 264	8 237
	Xhariep	21	11	182	309	353	876
	Unspecified	69	23	454	594	732	1 872
	Total	1 457	585	7 192	9 821	12 746	31 801
KwaZulu-Natal	Amajuba	50	25	348	483	670	1 576
	eThekweni	897	534	6 918	8 778	12 266	29 393
	Harry Gwala	140	98	1 237	1 253	1 764	4 492
	iLembe	59	59	516	667	928	2 229
	King Cetshwayo	353	155	1 639	1 631	1 999	5 777
	Ugu	210	137	1 806	2 046	3 122	7 321
	Umgungundlovu	306	189	2 564	3 091	4 671	10 821
	uMkhanyakude	163	77	750	699	1 093	2 782
	uMzinyathi	127	105	834	867	1 496	3 429
	uThukela	283	176	1 511	1 662	2 301	5 933
	Zululand	198	103	1 136	1 116	1 628	4 181
	Unspecified	625	435	4 412	4 524	6 652	16 648
	Total	3 411	2 093	23 671	26 817	38 590	94 582

**Appendix I: Number of deaths by age, province and district municipality of death occurrence, 2020
(concluded)**

District Municipality of death Occurrence	Age					
	0	1–14	15–44	45–64	65+	Total
Bojanala	234	149	1 300	1 418	2 089	5 190
Dr Kenneth Kaunda	361	134	1 752	2 493	3 005	7 745
Dr Ruth Segomotsi Mompati	351	139	1 034	1 140	1 543	4 207
Ngaka Modiri Molema	365	173	1 377	1 772	2 208	5 895
Unspecified	573	194	1 795	2 258	2 688	7 508
Total	1 884	789	7 258	9 081	11 533	30 545
City of Johannesburg	1 921	625	8 494	9 490	12 961	33 491
City of Tshwane	1 304	488	5 630	7 925	12 366	27 713
Ekurhuleni	1 175	390	4 290	5 559	7 423	18 837
Sedibeng	412	228	2 469	3 574	4 736	11 419
West Rand	181	75	1 188	1 448	1 791	4 683
Unspecified	533	305	3 854	3 783	4 313	12 788
Total	5 526	2 111	25 925	31 779	43 590	108 931
Ehlanzeni	409	341	2 741	2 862	3 901	10 254
Gert Sibande	485	186	1 991	2 096	2 552	7 310
Nkangala	280	140	1 556	2 102	2 871	6 949
Unspecified	211	155	1 580	1 418	1 988	5 352
Total	1 385	822	7 868	8 478	11 312	29 865
Capricorn	548	232	1 666	2 022	3 360	7 828
Mopani	671	283	1 756	2 129	3 532	8 371
Sekhukhune	310	215	1 677	2 014	3 455	7 671
Vhembe	274	194	1 133	1 489	2 747	5 837
Waterberg	251	117	1 112	1 241	2 017	4 738
Unspecified	505	331	2 347	2 666	4 121	9 970
Total	2 559	1 372	9 691	11 561	19 232	44 415

Appendix I1: Percentage distribution of deaths by age, province and district municipality of death occurrence, 2020

Province of death Occurrence	District Municipality of death Occurrence	Age					
		0	1–14	15–44	45–64	65+	Total
Western Cape	Cape Winelands	3,1	1,4	19,1	34,1	42,2	100,0
	Central Karoo	2,2	0,0	20,7	37,5	39,7	100,0
	City of Cape Town	3,1	1,1	21,2	30,0	44,7	100,0
	Garden Route	1,8	1,1	17,7	33,0	46,4	100,0
	Overberg	2,5	1,1	17,7	28,7	50,0	100,0
	West Coast	2,4	1,1	16,8	33,6	46,1	100,0
	Unspecified	2,0	1,3	23,9	32,0	40,8	100,0
	Total	2,8	1,1	20,9	31,1	44,1	100,0
Eastern Cape	Alfred Nzo	2,2	3,1	25,6	25,2	43,9	100,0
	Amathole	1,6	1,7	19,2	30,0	47,6	100,0
	Buffalo City	1,9	1,5	20,1	32,7	43,9	100,0
	Chris Hani	2,0	1,4	19,3	31,2	46,1	100,0
	Joe Gqabi	3,7	1,8	22,9	29,2	42,4	100,0
	Nelson Mandela Bay	2,0	1,2	21,3	33,8	41,7	100,0
	O.R.Tambo	2,5	3,2	27,4	26,5	40,4	100,0
	Sarah Baartman	2,0	1,1	19,1	33,8	44,2	100,0
	Unspecified	2,4	1,7	24,0	29,4	42,6	100,0
	Total	2,1	1,9	22,2	30,4	43,4	100,0
Northern Cape	Frances Baard	4,1	2,4	22,7	32,9	37,9	100,0
	John Taolo Gaetsewe	8,2	3,5	27,1	28,7	32,5	100,0
	Namakwa	4,9	1,7	18,7	32,5	42,1	100,0
	Pixley ka Seme	4,5	1,8	22,9	35,9	35,0	100,0
	Z F Mgcawu	4,0	2,6	25,0	33,8	34,6	100,0
	Unspecified	7,7	1,3	20,3	32,8	37,9	100,0
	Total	5,1	2,4	23,4	32,7	36,3	100,0
Free State	Fezile Dabi	4,1	1,5	21,3	30,0	43,0	100,0
	Lejweleputswa	5,5	1,9	22,7	32,5	37,4	100,0
	Mangaung	4,0	1,9	21,8	31,2	41,1	100,0
	Thabo Mofutsanyane	5,1	2,1	24,0	29,1	39,6	100,0
	Xhariep	2,4	1,3	20,8	35,3	40,3	100,0
	Unspecified	3,7	1,2	24,3	31,7	39,1	100,0
	Total	4,6	1,8	22,6	30,9	40,1	100,0
KwaZulu-Natal	Amajuba	3,2	1,6	22,1	30,6	42,5	100,0
	eThekweni	3,1	1,8	23,5	29,9	41,7	100,0
	Harry Gwala	3,1	2,2	27,5	27,9	39,3	100,0
	iLembe	2,6	2,6	23,1	29,9	41,6	100,0
	King Cetshwayo	6,1	2,7	28,4	28,2	34,6	100,0
	Ugu	2,9	1,9	24,7	27,9	42,6	100,0
	Umgungundlovu	2,8	1,7	23,7	28,6	43,2	100,0
	uMkhanyakude	5,9	2,8	27,0	25,1	39,3	100,0
	uMzinyathi	3,7	3,1	24,3	25,3	43,6	100,0
	uThukela	4,8	3,0	25,5	28,0	38,8	100,0
	Zululand	4,7	2,5	27,2	26,7	38,9	100,0
	Unspecified	3,8	2,6	26,5	27,2	40,0	100,0
	Total	3,6	2,2	25,0	28,4	40,8	100,0

Appendix I1: Percentage distribution of deaths by age, province and district municipality of death occurrence, 2020, (concluded)

Province of death Occurrence	District Municipality of death Occurrence	Age					
		0	1–14	15–44	45–64	65+	Total
North West	Bojanala	4,5	2,9	25,0	27,3	40,3	100,0
	Dr Kenneth Kaunda	4,7	1,7	22,6	32,2	38,8	100,0
	Dr Ruth Segomotsi Mompati	8,3	3,3	24,6	27,1	36,7	100,0
	Ngaka Modiri Molema	6,2	2,9	23,4	30,1	37,5	100,0
	Unspecified	7,6	2,6	23,9	30,1	35,8	100,0
	Total	6,2	2,6	23,8	29,7	37,8	100,0
Gauteng	City of Johannesburg	5,7	1,9	25,4	28,3	38,7	100,0
	City of Tshwane	4,7	1,8	20,3	28,6	44,6	100,0
	Ekurhuleni	6,2	2,1	22,8	29,5	39,4	100,0
	Sedibeng	3,6	2,0	21,6	31,3	41,5	100,0
	West Rand	3,9	1,6	25,4	30,9	38,2	100,0
	Unspecified	4,2	2,4	30,1	29,6	33,7	100,0
	Total	5,1	1,9	23,8	29,2	40,0	100,0
Mpumalanga	Ehlanzeni	4,0	3,3	26,7	27,9	38,0	100,0
	Gert Sibande	6,6	2,5	27,2	28,7	34,9	100,0
	Nkangala	4,0	2,0	22,4	30,2	41,3	100,0
	Unspecified	3,9	2,9	29,5	26,5	37,1	100,0
	Total	4,6	2,8	26,3	28,4	37,9	100,0
Limpopo	Capricorn	7,0	3,0	21,3	25,8	42,9	100,0
	Mopani	8,0	3,4	21,0	25,4	42,2	100,0
	Sekhukhune	4,0	2,8	21,9	26,3	45,0	100,0
	Vhembe	4,7	3,3	19,4	25,5	47,1	100,0
	Waterberg	5,3	2,5	23,5	26,2	42,6	100,0
	Unspecified	5,1	3,3	23,5	26,7	41,3	100,0
	Total	5,8	3,1	21,8	26,0	43,3	100,0

Appendix J: Number of deaths by sex, province and district municipality of death occurrence, 2020

Province of death occurrence	District municipality of death occurrence	Sex of deceased				Sex ratio at death
		Male	Female	Unspecified	Total	
Western Cape	Cape Winelands	3 003	2 643	22	5 668	114
	Central Karoo	98	86	0	184	114
	City of Cape Town	17 543	15 001	67	32 611	117
	Garden Route	1 002	932	0	1 934	108
	Overberg	1 109	917	2	2 028	121
	West Coast	2 126	1 924	8	4 058	110
	Unspecified	5 042	4 096	23	9 161	123
	Total	29 923	25 599	122	55 644	117
Eastern Cape	Alfred Nzo	3 189	3 489	16	6 694	91
	Amathole	3 955	3 888	21	7 864	102
	Buffalo City	4 577	4 625	18	9 220	99
	Chris Hani	5 019	5 264	9	10 292	95
	Joe Gqabi	1 652	1 740	17	3 409	95
	Nelson Mandela Bay	7 969	7 942	56	15 967	100
	O.R.Tambo	6 604	6 525	27	13 156	101
	Sarah Baartman	2 419	2 592	5	5 016	93
	Unspecified	3 266	3 139	18	6 423	104
	Total	38 650	39 204	187	78 041	99
Northern Cape	Frances Baard	2 773	2 537	11	5 321	109
	John Taolo Gaetsewe	1 363	1 293	8	2 664	105
	Namakwa	793	724	4	1 521	110
	Pixley ka Seme	1 121	1 098	4	2 223	102
	Z F Mgcawu	1 453	1 309	4	2 766	111
	Unspecified	254	212	1	467	120
	Total	7 757	7 173	32	14 962	108
Free State	Fezile Dabi	2 580	2 478	9	5 067	104
	Lejweleputswa	3 495	3 410	24	6 929	102
	Mangaung	4 376	4 411	33	8 820	99
	Thabo Mofutsanyane	4 166	4 044	27	8 237	103
	Xhariep	455	420	1	876	108
	Unspecified	936	934	2	1 872	100
	Total	16 008	15 697	96	31 801	102
KwaZulu-Natal	Amajuba	736	837	3	1 576	88
	eThekweni	14 763	14 564	66	29 393	101
	Harry Gwala	2 294	2 178	20	4 492	105
	iLembe	1 034	1 191	4	2 229	87
	King Cetshwayo	2 831	2 916	30	5 777	97
	Ugu	3 559	3 755	7	7 321	95
	Umgungundlovu	5 299	5 505	17	10 821	96
	uMkhanyakude	1 291	1 488	3	2 782	87
	uMzinyathi	1 649	1 769	11	3 429	93
	uThukela	2 951	2 961	21	5 933	100
	Zululand	2 009	2 166	6	4 181	93
	Unspecified	8 395	8 207	46	16 648	102
	Total	46 811	47 537	234	94 582	98

Appendix J: Number of deaths by sex, province and district municipality of death occurrence, 2020
(concluded)

Province of death occurrence	District municipality of death occurrence	Sex of deceased				Sex ratio at death
		Male	Female	Unspecified	Total	
North West	Bojanala	2 714	2 438	38	5 190	111
	Dr Kenneth Kaunda	4 140	3 577	28	7 745	116
	Dr Ruth Segomotsi Mompati	2 228	1 971	8	4 207	113
	Ngaka Modiri Molema	3 057	2 817	21	5 895	109
	Unspecified	3 969	3 489	50	7 508	114
	Total	16 108	14 292	145	30 545	113
Gauteng	City of Johannesburg	17 455	15 616	420	33 491	112
	City of Tshwane	14 309	13 303	101	27 713	108
	Ekurhuleni	9 515	9 135	187	18 837	104
	Sedibeng	5 854	5 501	64	11 419	106
	West Rand	2 556	2 086	41	4 683	123
	Unspecified	6 866	5 771	151	12 788	119
	Total	56 555	51 412	964	108 931	110
Mpumalanga	Ehlanzeni	5 173	5 046	35	10 254	103
	Gert Sibande	3 761	3 536	13	7 310	106
	Nkangala	3 590	3 328	31	6 949	108
	Unspecified	2 834	2 498	20	5 352	113
	Total	15 358	14 408	99	29 865	107
Limpopo	Capricorn	3 842	3 973	13	7 828	97
	Mopani	3 951	4 394	26	8 371	90
	Sekhukhune	3 719	3 921	31	7 671	95
	Vhembe	2 650	3 175	12	5 837	83
	Waterberg	2 397	2 332	9	4 738	103
	Unspecified	5 078	4 865	27	9 970	104
	Total	21 637	22 660	118	44 415	95

Appendix K: All underlying causes of death, 2020

Underlying Broad Group	Number	Percentage
Ill-defined and unknown causes of mortality (R95-R99)	77 536	15,8
Other external causes of accidental injury (W00-X59)	33 386	6,8
Covid-19 (U071-U072)	32 757	6,7
Diabetes mellitus (E10-E14)	32 100	6,6
Cerebrovascular diseases (I60-I69)	27 066	5,5
Hypertensive diseases (I10-I15)	24 847	5,1
Influenza and pneumonia (J09-J18)	19 805	4,0
Tuberculosis (A15-A19)	19 757	4,0
Human immunodeficiency virus [HIV] disease (B20-B24)	19 382	4,0
Ischaemic heart diseases (I20-I25)	15 759	3,2
Other forms of heart disease (I30-I52)	15 057	3,1
Other viral diseases (B25-B34)	12 434	2,5
Chronic lower respiratory diseases (J40-J47)	10 185	2,1
Malignant neoplasms of digestive organs (C15-C26)	9 536	1,9
Renal failure (N17-N19)	8 425	1,7
Other bacterial diseases (A30-A49)	6 538	1,3
Assault (X85-Y09)	5 668	1,2
Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	5 504	1,1
Malignant neoplasms of female genital organs (C51-C58)	5 257	1,1
Other acute lower respiratory infections (J20-J22)	4 869	1,0
Intestinal infectious diseases (A00-A09)	4 867	1,0
Transport accidents (V01-V99)	4 592	0,9
Other diseases of the respiratory system (J95-J99)	4 339	0,9
Malignant neoplasms of ill-defined, secondary and unspecified sites (C76-C80)	3 983	0,8
Certain disorders involving the immune mechanism (D80-D89)	3 845	0,8
Malignant neoplasms of breast (C50)	3 826	0,8
Malignant neoplasms of male genital organs (C60-C63)	3 791	0,8
Metabolic disorders (E70-E90)	3 577	0,7
Episodic and paroxysmal disorders (G40-G47)	3 455	0,7
General symptoms and signs (R50-R69)	3 235	0,7
Diseases of liver (K70-K77)	3 214	0,7
Pulmonary heart disease and diseases of pulmonary circulation (I26-I28)	3 133	0,6
Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	3 015	0,6
Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81-C96)	2 966	0,6
Event of undetermined intent (Y10-Y34)	2 603	0,5
Diseases of oesophagus, stomach and duodenum (K20-K31)	2 091	0,4
Organic, including symptomatic, mental disorders (F00-F09)	2 035	0,4
Aplastic and other anaemias (D60-D64)	1 927	0,4
Other disorders originating in the perinatal period (P90-P96)	1 900	0,4
Other respiratory diseases principally affecting the interstitium (J80-J84)	1 744	0,4
Inflammatory diseases of the central nervous system (G00-G09)	1 694	0,3
Disorders related to length of gestation and fetal growth (P05-P08)	1 628	0,3
Infections specific to the perinatal period (P35-P39)	1 461	0,3
Other diseases of intestines (K55-K64)	1 410	0,3
Protozoal diseases (B50-B64)	1 367	0,3
Diseases of arteries, arterioles and capillaries (I70-I79)	1 191	0,2
Other diseases of the digestive system (K90-K93)	1 158	0,2
Malignant neoplasms of lip, oral cavity and pharynx (C00-C14)	990	0,2
Malignant neoplasms of urinary tract (C64-C68)	976	0,2
Disorders of gallbladder, biliary tract and pancreas (K80-K87)	972	0,2
Other disorders of the nervous system (G90-G99)	870	0,2
Malignant neoplasms of skin (C43-C44)	833	0,2
Other disorders of glucose regulation and pancreatic internal secretion (E15-E16)	833	0,2
Lung diseases due to external agents (J60-J70)	822	0,2
Sequelae of infectious and parasitic diseases (B90-B94)	816	0,2
Neoplasms of uncertain or unknown behaviour (D37-D48)	811	0,2
Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04)	809	0,2

Appendix K: All underlying causes of death, 2020, continued

Underlying Broad Group	Number	Percentage
Acute upper respiratory infections (J00-J06)	795	0,2
Arthropathies (M00-M25)	786	0,2
Noninfective enteritis and colitis (K50-K52)	769	0,2
Cerebral palsy and other paralytic syndromes (G80-G83)	724	0,1
Other degenerative diseases of the nervous system (G30-G32)	720	0,1
Malnutrition (E40-E46)	719	0,1
Malignant neoplasms of mesothelial and soft tissue (C45-C49)	703	0,1
Complications of medical and surgical care (Y40-Y84)	683	0,1
Other disorders of the skin and subcutaneous tissue (L80-L99)	676	0,1
Congenital malformations of the circulatory system (Q20-Q28)	652	0,1
Malignant neoplasms of eye, brain and other parts of central nervous system (C69-C72)	592	0,1
Diseases of veins, lymphatic vessels and lymph nodes, not elsewhere classified (I80-I89)	563	0,1
Extrapyramidal and movement disorders (G20-G26)	556	0,1
Other disorders of kidney and ureter (N25-N29)	517	0,1
Mycoses (B35-B49)	491	0,1
Mental and behavioural disorders due to psychoactive substance use (F10-F19)	483	0,1
Other diseases of urinary system (N30-N39)	467	0,1
Obesity and other hyperalimentation (E65-E68)	453	0,1
Systemic connective tissue disorders (M30-M36)	444	0,1
Other congenital malformations (Q80-Q89)	438	0,1
Coagulation defects, purpura and other haemorrhagic conditions (D65-D69)	414	0,1
Chromosomal abnormalities, not elsewhere classified (Q90-Q99)	395	0,1
Disorders of thyroid gland (E00-E07)	371	0,1
Digestive system disorders of fetus and newborn (P75-P78)	340	0,1
Haemorrhagic and haematological disorders of fetus and newborn (P50-P61)	335	0,1
Other diseases of pleura (J90-J94)	308	0,1
Benign neoplasms (D10-D36)	295	0,1
Soft tissue disorders (M60-M79)	282	0,1
Diseases of male genital organs (N40-N51)	280	0,1
Infections of the skin and subcutaneous tissue (L00-L08)	246	0,1
Schizophrenia, schizotypal and delusional disorders (F20-F29)	239	0,0
Viral hepatitis (B15-B19)	230	0,0
Malignant neoplasms of thyroid and other endocrine glands (C73-C75)	224	0,0
Renal tubulo-interstitial diseases (N10-N16)	222	0,0
Hernia (K40-K46)	211	0,0
Intentional self-harm (X60-X84)	211	0,0
Diseases of peritoneum (K65-K67)	207	0,0
Chronic rheumatic heart diseases (I05-I09)	205	0,0
Systemic atrophies primarily affecting the central nervous system (G10-G14)	189	0,0
Suppurative and necrotic conditions of lower respiratory tract (J85-J86)	165	0,0
Congenital malformations of the nervous system (Q00-Q07)	162	0,0
Other and unspecified disorders of the circulatory system (I95-I99)	140	0,0
Glomerular diseases (N00-N08)	140	0,0
Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium (O10-O16)	138	0,0
Other congenital malformations of the digestive system (Q38-Q45)	138	0,0
Diseases of appendix (K35-K38)	130	0,0
Congenital malformations and deformations of the musculoskeletal system (Q65-Q79)	124	0,0
Noninflammatory disorders of female genital tract (N80-N98)	122	0,0
Osteopathies and chondropathies (M80-M94)	120	0,0
Disorders of other endocrine glands (E20-E35)	117	0,0
Complications of labour and delivery (O60-O75)	111	0,0
Pregnancy with abortive outcome (O00-O08)	106	0,0
Other obstetric conditions, not elsewhere classified (O94-O99)	104	0,0
Malignant neoplasms of bone and articular cartilage (C40-C41)	103	0,0
Viral infections of the central nervous system (A80-A89)	94	0,0
Congenital malformations of the urinary system (Q60-Q64)	87	0,0
Diseases of myoneural junction and muscle (G70-G73)	76	0,0

Appendix K: All underlying causes of death, 2020, continued

Underlying Broad Group	Number	Percentage
Viral infections characterized by skin and mucous membrane lesions (B00-B09)	74	0,0
Other diseases of blood and blood-forming organs (D70-D77)	74	0,0
Mood [affective] disorders (F30-F39)	74	0,0
Infections with a predominantly sexual mode of transmission (A50-A64)	71	0,0
Polyneuropathies and other disorders of the peripheral nervous system (G60-G64)	70	0,0
Demyelinating diseases of the central nervous system (G35-G37)	68	0,0
Other diseases of upper respiratory tract (J30-J39)	66	0,0
Nutritional anaemias (D50-D53)	61	0,0
Other nutritional deficiencies (E50-E64)	61	0,0
Complications predominantly related to the puerperium (O85-O92)	60	0,0
Conditions involving the integument and temperature regulation of fetus and newborn (P80-P83)	60	0,0
Helminthiasis (B65-B83)	55	0,0
Diseases of oral cavity, salivary glands and jaws (K00-K14)	55	0,0
Other infectious diseases (B99)	54	0,0
Urticaria and erythema (L50-L54)	47	0,0
Haemolytic anaemias (D55-D59)	46	0,0
Dorsopathies (M40-M54)	45	0,0
Sequelae of external causes of morbidity and mortality (Y85-Y89)	43	0,0
Congenital malformations of the respiratory system (Q30-Q34)	41	0,0
Inflammatory diseases of female pelvic organs (N70-N77)	37	0,0
Maternal care related to the fetus and amniotic cavity and possible delivery problems (O30-O48)	35	0,0
Transitory endocrine and metabolic disorders specific to fetus and newborn (P70-P74)	33	0,0
Diseases of middle ear and mastoid (H65-H75)	27	0,0
Birth trauma (P10-P15)	21	0,0
Bullous disorders (L10-L14)	20	0,0
Dermatitis and eczema (L20-L30)	20	0,0
Behavioural syndromes associated with physiological disturbances and physical factors (F50-F59)	17	0,0
Unspecified mental disorder (F99)	16	0,0
Urolithiasis (N20-N23)	12	0,0
Disorders of breast (N60-N64)	11	0,0
Other maternal disorders predominantly related to pregnancy (O20-O29)	11	0,0
Neurotic, stress-related and somatoform disorders (F40-F48)	9	0,0
Acute rheumatic fever (I00-I02)	9	0,0
Congenital malformations of eye, ear, face and neck (Q10-Q18)	8	0,0
Cleft lip and cleft palate (Q35-Q37)	7	0,0
In situ neoplasms (D00-D09)	6	0,0
Certain zoonotic bacterial diseases (A20-A28)	5	0,0
Disorders of psychological development (F80-F89)	5	0,0
Pediculosis, acariasis and other infestations (B85-B89)	4	0,0
Nerve, nerve root and plexus disorders (G50-G59)	4	0,0
Disorders of lens (H25-H28)	4	0,0
Symptoms and signs involving the digestive system and abdomen (R10-R19)	4	0,0
Arthropod-borne viral fevers and viral haemorrhagic fevers (A92-A99)	3	0,0
Disorders of eyelid, lacrimal system and orbit (H00-H06)	3	0,0
Papulosquamous disorders (L40-L45)	3	0,0
Congenital malformations of genital organs (Q50-Q56)	3	0,0
Symptoms and signs involving cognition, perception, emotional state and behaviour (R40-R46)	3	0,0
Mental retardation (F70-F79)	2	0,0
Behavioural and emotional disorders with onset usually occurring in childhood and adolescence (F90-F98)	2	0,0
Disorders of conjunctiva (H10-H13)	2	0,0
Glaucoma (H40-H42)	2	0,0
Visual disturbances and blindness (H53-H54)	2	0,0
Symptoms and signs involving the skin and subcutaneous tissue (R20-R23)	2	0,0
Abnormal findings on diagnostic imaging and in function studies, without diagnosis (R90-R94)	2	0,0
Other spirochaetal diseases (A65-A69)	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

Appendix K: All underlying causes of death, 2020 (concluded)

Underlying Broad Group	Number	Percentage
Other disorders of ear (H90-H95)	1	0,0
Radiation-related disorders of the skin and subcutaneous tissue (L55-L59)	1	0,0
Other disorders of the musculoskeletal system and connective tissue (M95-M99)	1	0,0
All causes	489 744	100,0

Appendix L: Detailed description of the broad-based groups of natural causes of death which were among the ten leading causes, 2020

Causes of death (based on ICD-10 Version: 2016)		Number	Percentage
	Diabetes mellitus (E10-E14)		
E10	Type 1 diabetes mellitus (E10)	315	1,0
E11	Type 2 diabetes mellitus (E11)	2 827	8,8
E12	Malnutrition-related diabetes mellitus(E12)	3	0,0
E13	Other specified diabetes mellitus (E13)	5	0,0
E14	Unspecified diabetes mellitus(E14)	28 950	90,2
	Total	32 100	100,0
	Covid-19 (U071_U072)		
U07	COVID-19 (U07)	32 757	100,0
	Total	32 757	100,0
	Hypertensive diseases (I10-I15)		
I10	Essential (primary) hypertension	16 433	66,1
I11	Hypertensive heart disease	5 274	21,2
I12	Hypertensive renal disease	2 721	11,0
I13	Hypertensive heart and renal disease	419	2
	Total	24 847	100,0
	Cerebrovascular diseases (I60-I69)		
I60	Subarachnoid haemorrhage	416	1,5
I61	Intracerebral haemorrhage	1 574	5,8
I62	Other nontraumatic intracranial haemorrhage	938	3,5
I63	Cerebral infarction	580	2,1
I64	Stroke, not specified as haemorrhage or infarction	22 313	82,4
I67	Other cerebrovascular diseases	1 077	4,0
I69	Sequelae of cerebrovascular disease	168	0,6
	Total	27 066	100,0
	Other forms of heart disease (I30-I52)		
I30	Acute pericarditis	6	0,0
I31	Other diseases of pericardium	97	0,4
I33	Acute and subacute endocarditis	91	0,4
I34	Nonrheumatic mitral valve disorders	41	0,2
I35	Nonrheumatic aortic valve disorders	174	0,7
I36	Nonrheumatic tricuspid valve disorders	2	0,0
I37	Pulmonary valve disorders	10	0,0
I38	Endocarditis, valve unspecified	171	0,7
I40	Acute myocarditis	35	0,1
I42	Cardiomyopathy	3 501	13,6
I44	Atrioventricular and left bundle-branch block	10	0,0
I45	Other conduction disorders	39	0,2
I46	Cardiac arrest	10 695	41,5
I47	Paroxysmal tachycardia	19	0,1
I48	Atrial fibrillation and flutter	511	2,0
I49	Other cardiac arrhythmias	285	1,1
I50	Heart failure	9 000	34,9
I51	Complications and ill-defined descriptions of heart disease	1 065	4,1
	Total	25 752	100,0
	Influenza and pneumonia (J09-J18)		
J09	Influenza due to identified zoonotic or pandemic influenza virus	1	0,0
J11	Influenza, virus not identified	286	1,4
J12	Viral pneumonia, not elsewhere classified	81	0,4
J13	Pneumonia due to Streptococcus pneumoniae	3	0,0
J15	Pneumonia due to Haemophilus influenzae	134	0,7
J16	Pneumonia due to other infectious organisms, not elsewhere classified	1	0,0
J18	Pneumonia, organism unspecified	19 299	97,4
	Total	19 805	100,0

Appendix L: Detailed description of the broad-based groups of natural causes of death which were among the ten leading causes, 2020 (concluded)

Causes of death (based on ICD-10 Version: 2016)		Number	Percentage
Tuberculosis(A15-A19)			
A15	Respiratory tuberculosis, bacteriologically and histologically confirmed	6	0,0
A16	Respiratory tuberculosis, not confirmed bacteriologically or histologically	14 879	75,3
A17	Tuberculosis of nervous system	1 187	6,0
A18	Tuberculosis of other organs	648	3,3
A19	Miliary tuberculosis	2 534	12,8
Drug resistant tuberculosis			
U51	Multi-drug resistant tuberculosis (U51)	474	2,4
U52	Extensively drug-resistant tuberculosis (U52)	29	0,1
	Total	19 757	100,0
Human immunodeficiency virus [HIV] disease(B20-B24)			
B20	Human immunodeficiency virus [HIV] disease resulting in infectious and parasitic diseases	10 321	53,3
B21	Human immunodeficiency virus [HIV] disease resulting in malignant neoplasms	944	4,9
B22	Human immunodeficiency virus [HIV] disease resulting in other specified diseases	725	3,7
B23	Human immunodeficiency virus [HIV] disease resulting in other conditions	4 354	22,5
B24	Unspecified human immunodeficiency virus [HIV] disease	3 038	15,7
	Total	19 382	100,0
Ischaemic heart diseases(I20_I25)			
I20	Angina pectoris	51	0,3
I21	Acute myocardial infarction	13 046	82,8
I25	Chronic ischaemic heart disease	2 662	16,9
	Total	15 759	100,0
Other viral diseases(B25-B34)			
B25	Cytomegaloviral disease	17	0,1
B27	Infectious mononucleosis	1	0,0
B33	Other viral diseases, not elsewhere classified	12 372	99,5
B34	Viral infection of unspecified site	44	0,4
	Total	12 434	100,0

Appendix M: The ten leading underlying natural causes of death by age and sex: South Africa, 2020

SA, all ages				SA, Males, all ages				SA, Females, all ages			
		No	%			No	%			No	%
1	Covid-19 (U071-U072)	32 757	6,7	1	Covid-19 (U071-U072)	15 913	6,4	1	Diabetes mellitus (E10-E14)	19 545	8,2
2	Diabetes mellitus (E10-E14)	32 100	6,6	2	Diabetes mellitus (E10-E14)	12 518	5,0	2	Covid-19 (U071-U072)	16 793	7,0
3	Cerebrovascular diseases (I60-I69)	27 066	5,5	3	Tuberculosis (A15-A19)	12 305	4,9	3	Hypertensive diseases (I10-I15)	15 606	6,5
4	Hypertensive diseases (I10-I15)	24 847	5,1	4	Cerebrovascular diseases (I60-I69)	11 697	4,7	4	Cerebrovascular diseases (I60-I69)	15 315	6,4
5	Influenza and pneumonia (J09-J18)	19 805	4,0	5	Influenza and pneumonia (J09-J18)	10 148	4,1	5	Human immunodeficiency virus [HIV] disease (B20-B24)	9 697	4,1
6	Tuberculosis (A15-A19)	19 757	4,0	6	Human immunodeficiency virus [HIV] disease (B20-B24)	9 606	3,9	6	Influenza and pneumonia (J09-J18)	9 578	4,0
7	Human immunodeficiency virus [HIV] disease (B20-B24)	19 382	4,0	7	Hypertensive diseases (I10-I15)	9 210	3,7	7	Other forms of heart disease (I30-I52)	8 112	3,4
8	Ischaemic heart diseases (I20-I25)	15 759	3,2	8	Ischaemic heart diseases (I20-I25)	8 703	3,5	8	Tuberculosis (A15-A19)	7 357	3,1
9	Other forms of heart disease (I30-I52)	15 057	3,1	9	Other forms of heart disease (I30-I52)	6 919	2,8	9	Ischaemic heart diseases (I20-I25)	7 033	3,0
10	Other viral diseases (B25-B34)	12 434	2,5	10	Other viral diseases (B25-B34)	6 119	2,5	10	Other viral diseases (B25-B34)	6 257	2,6
	Other Natural causes	223 594	45,7		Other Natural causes	109 588	44,0		Other Natural causes	113 075	47,4
	Non-natural causes	47 186	9,6		Non-natural causes	36 606	14,7		Non-natural causes	9 982	4,2
	All causes	489 744	100,0		All causes	249 332	100,0		All causes	238 350	100,0
SA, 0				SA, Males, 0				SA, Females, 0			
		No	%			No	%			No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	3 011	14,9	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	1 646	15,2	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	1 307	14,4
2	Other disorders originating in the perinatal period (P90-P96)	1 896	9,4	2	Other disorders originating in the perinatal period (P90-P96)	1 081	10,0	2	Other disorders originating in the perinatal period (P90-P96)	758	8,4
3	Disorders related to length of gestation and fetal growth (P05-P08)	1 626	8,0	3	Disorders related to length of gestation and fetal growth (P05-P08)	876	8,1	3	Disorders related to length of gestation and fetal growth (P05-P08)	717	7,9
4	Infections specific to the perinatal period (P35-P39)	1 460	7,2	4	Infections specific to the perinatal period (P35-P39)	818	7,6	4	Infections specific to the perinatal period (P35-P39)	619	6,8
5	Influenza and pneumonia (J09-J18)	1 016	5,0	5	Intestinal infectious diseases (A00-A09)	530	4,9	5	Influenza and pneumonia (J09-J18)	479	5,3
6	Intestinal infectious diseases (A00-A09)	984	4,9	6	Influenza and pneumonia (J09-J18)	527	4,9	6	Intestinal infectious diseases (A00-A09)	444	4,9
7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04)	806	4,0	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04)	430	4,0	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04)	354	3,9
8	Other bacterial diseases (A30-A49)	501	2,5	8	Other bacterial diseases (A30-A49)	278	2,6	8	Congenital malformations of the circulatory system (Q20-Q28)	221	2,4
9	Congenital malformations of the circulatory system (Q20-Q28)	483	2,4	9	Congenital malformations of the circulatory system (Q20-Q28)	253	2,3	9	Other bacterial diseases (A30-A49)	217	2,4
10	Other congenital malformations (Q80-Q89)	379	1,9	10	Other congenital malformations (Q80-Q89)	200	1,8	10	Chromosomal abnormalities, not elsewhere classified (Q90-Q99)	170	1,9
	Other Natural causes	7 387	36,5		Other Natural causes	3 826	35,4		Other Natural causes	3 461	38,2
	Non-natural causes	673	3,3		Non-natural causes	349	3,2		Non-natural causes	311	3,4
	All causes	20 222	100,0		All causes	10 814	100,0		All causes	9 058	100,0

Appendix M: The ten leading underlying natural causes of death by age and sex: South Africa, 2020 (continued)

	SA, 1-14	No	%		SA, Males, 1-14	No	%		SA, Females, 1-14	No	%
1	Intestinal infectious diseases (A00-A09)	532	5,2	1	Intestinal infectious diseases (A00-A09)	284	5,1	1	Intestinal infectious diseases (A00-A09)	245	5,3
2	Influenza and pneumonia (J09-J18)	484	4,7	2	Influenza and pneumonia (J09-J18)	239	4,3	2	Influenza and pneumonia (J09-J18)	239	5,2
3	Tuberculosis (A15-A19)	263	2,6	3	Malnutrition (E40-E46)	130	2,3	3	Tuberculosis (A15-A19)	140	3,0
4	Malnutrition (E40-E46)	245	2,4	4	Cerebral palsy and other paralytic syndromes (G80-G83)	125	2,2	4	Malnutrition (E40-E46)	112	2,4
5	Cerebral palsy and other paralytic syndromes (G80-G83)	219	2,1	5	Tuberculosis (A15-A19)	123	2,2	5	Other forms of heart disease (I30-I52)	105	2,3
6	Other forms of heart disease (I30-I52)	201	2,0	6	Episodic and paroxysmal disorders (G40-G47)	106	1,9	6	Other bacterial diseases (A30-A49)	92	2,0
7	Episodic and paroxysmal disorders (G40-G47)	195	1,9	7	Human immunodeficiency virus [HIV] disease (B20-B24)	100	1,8	7	Cerebral palsy and other paralytic syndromes (G80-G83)	92	2,0
8	Human immunodeficiency virus [HIV] disease (B20-B24)	184	1,8	8	Other forms of heart disease (I30-I52)	96	1,7	8	Episodic and paroxysmal disorders (G40-G47)	88	1,9
9	Other bacterial diseases (A30-A49)	180	1,8	9	Metabolic disorders (E70-E90)	91	1,6	9	Human immunodeficiency virus [HIV] disease (B20-B24)	83	1,8
10	Metabolic disorders (E70-E90)	159	1,6	10	Other bacterial diseases (A30-A49)	87	1,6	10	Other viral diseases (B25-B34)	77	1,7
	Other Natural causes	4 393	42,9		Other Natural causes	2 220	39,7		Other Natural causes	2 138	46,5
	Non-natural causes	3 196	31,2		Non-natural causes	1 996	35,7		Non-natural causes	1 185	25,8
	All causes	10 251	100,0		All causes	5 597	100,0		All causes	4 596	100,0
	SA, 15-44	No	%		SA, Males, 15-44	No	%		SA, Females, 15-44	No	%
1	Human immunodeficiency virus [HIV] disease (B20-B24)	11 008	9,6	1	Tuberculosis (A15-A19)	5 405	8,0	1	Human immunodeficiency virus [HIV] disease (B20-B24)	5 865	12,9
2	Tuberculosis (A15-A19)	9 281	8,1	2	Human immunodeficiency virus [HIV] disease (B20-B24)	5 082	7,5	2	Tuberculosis (A15-A19)	3 821	8,4
3	Other viral diseases (B25-B34)	6 606	5,8	3	Other viral diseases (B25-B34)	3 089	4,5	3	Other viral diseases (B25-B34)	3 481	7,7
4	Covid-19 (U071-U072)	3 912	3,4	4	Influenza and pneumonia (J09-J18)	2 028	3,0	4	Covid-19 (U071-U072)	2 012	4,4
5	Influenza and pneumonia (J09-J18)	3 804	3,3	5	Covid-19 (U071-U072)	1 883	2,8	5	Influenza and pneumonia (J09-J18)	1 739	3,8
6	Other forms of heart disease (I30-I52)	1 899	1,7	6	Other forms of heart disease (I30-I52)	1 018	1,5	6	Malignant neoplasms of female genital organs (C51-C58)	1 241	2,7
7	Certain disorders involving the immune mechanism (D80-D89)	1 893	1,7	7	Cerebrovascular diseases (I60-I69)	975	1,4	7	Certain disorders involving the immune mechanism (D80-D89)	973	2,1
8	Cerebrovascular diseases (I60-I69)	1 802	1,6	8	Certain disorders involving the immune mechanism (D80-D89)	915	1,3	8	Other forms of heart disease (I30-I52)	870	1,9
9	Diabetes mellitus (E10-E14)	1 729	1,5	9	Diabetes mellitus (E10-E14)	861	1,3	9	Diabetes mellitus (E10-E14)	859	1,9
10	Renal failure (N17-N19)	1 507	1,3	10	Episodic and paroxysmal disorders (G40-G47)	845	1,2	10	Cerebrovascular diseases (I60-I69)	813	1,8
	Other Natural causes	40 067	35,1		Non-natural causes	25 516	37,5		Other Natural causes	18 826	41,5
	Non-natural causes	30 780	26,9		Other Natural causes	20 355	29,9		Non-natural causes	4 836	10,7
	All causes	114 288	100,0		All causes	67 972	100,0		All causes	45 336	100,0

Appendix M: The ten leading underlying natural causes of death by age and sex: South Africa, 2020 (continued)

SA, 45-64				SA, Males, 45-64				SA, Females, 45-64			
		No	%			No	%			No	%
1	Covid-19 (U071-U072)	13 591	9,5	1	Covid-19 (U071-U072)	6 908	8,7	1	Covid-19 (U071-U072)	6 658	10,4
2	Diabetes mellitus (E10-E14)	11 419	7,9	2	Diabetes mellitus (E10-E14)	4 946	6,3	2	Diabetes mellitus (E10-E14)	6 463	10,1
3	Tuberculosis (A15-A19)	7 043	4,9	3	Tuberculosis (A15-A19)	4 808	6,1	3	Hypertensive diseases (I10-I15)	3 476	5,4
4	Cerebrovascular diseases (I60-I69)	7 012	4,9	4	Human immunodeficiency virus [HIV] disease (B20-B24)	3 733	4,7	4	Cerebrovascular diseases (I60-I69)	3 267	5,1
5	Human immunodeficiency virus [HIV] disease (B20-B24)	6 791	4,7	5	Cerebrovascular diseases (I60-I69)	3 725	4,7	5	Human immunodeficiency virus [HIV] disease (B20-B24)	3 045	4,7
6	Hypertensive diseases (I10-I15)	6 310	4,4	6	Ischaemic heart diseases (I20-I25)	3 171	4,0	6	Malignant neoplasms of female genital organs (C51-C58)	2 328	3,6
7	Influenza and pneumonia (J09-J18)	5 390	3,7	7	Influenza and pneumonia (J09-J18)	3 118	3,9	7	Influenza and pneumonia (J09-J18)	2 256	3,5
8	Ischaemic heart diseases (I20-I25)	4 912	3,4	8	Hypertensive diseases (I10-I15)	2 823	3,6	8	Tuberculosis (A15-A19)	2 206	3,4
9	Other viral diseases (B25-B34)	4 544	3,2	9	Other viral diseases (B25-B34)	2 407	3,0	9	Other viral diseases (B25-B34)	2 116	3,3
10	Other forms of heart disease (I30-I52)	4 112	2,9	10	Malignant neoplasms of digestive organs (C15-C26)	2 265	2,9	10	Other forms of heart disease (I30-I52)	1 854	2,9
	Other Natural causes	64 052	44,6		Other Natural causes	34 556	43,7		Other Natural causes	28 717	44,7
	Non-natural causes	8 591	6,0		Non-natural causes	6 596	8,3		Non-natural causes	1 879	2,9
	All causes	143 767	100,0		All causes	79 056	100,0		All causes	64 265	100,0
SA, 65+				SA, Males, 65+				SA, Females, 65+			
		No	%			No	%			No	%
1	Diabetes mellitus (E10-E14)	18 891	9,4	1	Covid-19 (U071-U072)	7 055	8,2	1	Diabetes mellitus (E10-E14)	12 183	10,6
2	Cerebrovascular diseases (I60-I69)	18 107	9,0	2	Cerebrovascular diseases (I60-I69)	6 923	8,1	2	Hypertensive diseases (I10-I15)	11 501	10,0
3	Hypertensive diseases (I10-I15)	17 329	8,6	3	Diabetes mellitus (E10-E14)	6 690	7,8	3	Cerebrovascular diseases (I60-I69)	11 165	9,7
4	Covid-19 (U071-U072)	15 110	7,5	4	Hypertensive diseases (I10-I15)	5 814	6,8	4	Covid-19 (U071-U072)	8 046	7,0
5	Ischaemic heart diseases (I20-I25)	9 819	4,9	5	Ischaemic heart diseases (I20-I25)	4 882	5,7	5	Other forms of heart disease (I30-I52)	5 212	4,5
6	Influenza and pneumonia (J09-J18)	9 111	4,5	6	Influenza and pneumonia (J09-J18)	4 236	4,9	6	Ischaemic heart diseases (I20-I25)	4 930	4,3
7	Other forms of heart disease (I30-I52)	8 711	4,3	7	Other forms of heart disease (I30-I52)	3 491	4,1	7	Influenza and pneumonia (J09-J18)	4 865	4,2
8	Chronic lower respiratory diseases (J40-J47)	5 907	2,9	8	Chronic lower respiratory diseases (J40-J47)	3 341	3,9	8	Chronic lower respiratory diseases (J40-J47)	2 561	2,2
9	Malignant neoplasms of digestive organs (C15-C26)	4 812	2,4	9	Malignant neoplasms of male genital organs (C60-C63)	3 063	3,6	9	Malignant neoplasms of digestive organs (C15-C26)	2 322	2,0
10	Renal failure (N17-N19)	4 102	2,0	10	Malignant neoplasms of digestive organs (C15-C26)	2 487	2,9	10	Renal failure (N17-N19)	2 134	1,9
	Other Natural causes	85 371	42,4		Other Natural causes	35 762	41,6		Other Natural causes	48 405	42,1
	Non-natural causes	3 946	2,0		Non-natural causes	2 149	2,5		Non-natural causes	1 771	1,5
	All causes	201 216	100,0		All causes	85 893	100,0		All causes	115 095	100,0

Appendix M1: The ten leading underlying natural causes of death by age and sex: Western Cape, 2020

	Western Cape, all ages	No	%		Western Cape, Males, all ages	No	%		Western Cape, Females, all ages	No	%
1	Covid_19 (U071_U072)	6 209	11,2	1	Covid_19 (U071_U072)	3 201	10,7	1	Covid_19 (U071_U072)	3 001	11,7
2	Diabetes mellitus (E10_E14)	4 241	7,6	2	Ischaemic heart diseases (I20_I25)	2 040	6,8	2	Diabetes mellitus (E10_E14)	2 453	9,6
3	Ischaemic heart diseases (I20_I25)	3 794	6,8	3	Diabetes mellitus (E10_E14)	1 783	6,0	3	Ischaemic heart diseases (I20_I25)	1 750	6,8
4	Cerebrovascular diseases (I60_I69)	3 224	5,8	4	Cerebrovascular diseases (I60_I69)	1 502	5,0	4	Cerebrovascular diseases (I60_I69)	1 720	6,7
5	Human immunodeficiency virus [HIV] disease (B20_B24)	2 909	5,2	5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 435	4,8	5	Hypertensive diseases (I10_I15)	1 581	6,2
6	Hypertensive diseases (I10_I15)	2 645	4,8	6	Tuberculosis (A15_A19)	1 246	4,2	6	Human immunodeficiency virus [HIV] disease (B20_B24)	1 453	5,7
7	Malignant neoplasms of digestive organs (C15_C26)	2 086	3,7	7	Malignant neoplasms of digestive organs (C15_C26)	1 155	3,9	7	Malignant neoplasms of digestive organs (C15_C26)	929	3,6
8	Tuberculosis (A15_A19)	1 885	3,4	8	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	1 154	3,9	8	Malignant neoplasms of breast (C50)	797	3,1
9	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	1 849	3,3	9	Hypertensive diseases (I10_I15)	1 061	3,5	9	Other forms of heart disease (I30_I52)	759	3,0
10	Chronic lower respiratory diseases (J40_J47)	1 756	3,2	10	Chronic lower respiratory diseases (J40_J47)	1 041	3,5	10	Chronic lower respiratory diseases (J40_J47)	709	2,8
	Other Natural	19 179	34,5		Other Natural	9 421	31,5		Other Natural	9 487	37,1
	Non-natural	5 867	10,5		Non-natural	4 884	16,3		Non-natural	960	3,8
	All causes	55 644	100,0		All causes	29 923	100,0		All causes	25 599	100,0
	Western Cape,0	No	%		Western Cape,Males,0	No	%		Western Cape,Females,0	No	%
1	Disorders related to length of gestation and fetal growth (P05_P08)	188	12,1	1	Disorders related to length of gestation and fetal growth (P05_P08)	114	13,6	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	87	12,5
2	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	186	11,9	2	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	98	11,7	2	Disorders related to length of gestation and fetal growth (P05_P08)	73	10,5
3	Other disorders originating in the perinatal period (P90_P96)	141	9,1	3	Other disorders originating in the perinatal period (P90_P96)	68	8,1	3	Other disorders originating in the perinatal period (P90_P96)	69	9,9
4	Infections specific to the perinatal period (P35_P39)	95	6,1	4	Infections specific to the perinatal period (P35_P39)	56	6,7	4	Congenital malformations of the circulatory system (Q20_Q28)	40	5,7
5	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	82	5,3	5	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	47	5,6	5	Infections specific to the perinatal period (P35_P39)	39	5,6
6	Congenital malformations of the circulatory system (Q20_Q28)	75	4,8	6	Congenital malformations of the circulatory system (Q20_Q28)	34	4	6	Other acute lower respiratory infections (J20_J22)	36	5,2
7	Other acute lower respiratory infections (J20_J22)	66	4,2	7	Influenza and pneumonia (J09_J18)	32	3,8	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	33	4,7
8	Influenza and pneumonia (J09_J18)	61	3,9	8	Other acute lower respiratory infections (J20_J22)	30	3,6	8	Influenza and pneumonia (J09_J18)	29	4,2
9	Intestinal infectious diseases (A00_A09)	50	3,2	9	Intestinal infectious diseases (A00_A09)	29	3,4	9	Chromosomal abnormalities, not elsewhere classified (Q90_Q99)	21	3,0
10	Chromosomal abnormalities, not elsewhere classified (Q90_Q99)	43	2,8	10	Other bacterial diseases (A30_A49)	23	2,7	10	Intestinal infectious diseases (A00_A09)	20	2,9
	Other Natural	539	34,6		Other Natural	290	34,5		Other Natural	241	34,5
	Non-natural	31	2,0		Non-natural	20	2,4		Non-natural	10	1,4
	All causes	1 557	100,0		All causes	841	100,0		All causes	698	100,0

Appendix M1: The ten leading underlying natural causes of death by age and sex: Western Cape, 2020 (continued)

Western Cape,1-14				Western Cape,Males,1-14				Western Cape,Females,1-14			
	No	%		No	%		No	%		No	%
1 Cerebral palsy and other paralytic syndromes (G80_G83)	25	4	1 Cerebral palsy and other paralytic syndromes (G80_G83)	19	5,3	1 Other forms of heart disease (I30_I52)	15	5,5			
2 Tuberculosis (A15_A19)	21	3,3	2 Tuberculosis (A15_A19)	9	2,5	2 Tuberculosis (A15_A19)	12	4,4			
3 Influenza and pneumonia (J09_J18)	21	3,3	3 Influenza and pneumonia (J09_J18)	9	2,5	3 Influenza and pneumonia (J09_J18)	12	4,4			
4 Other forms of heart disease (I30_I52)	20	3,2	4 Intestinal infectious diseases (A00_A09)	8	2,2	4 Intestinal infectious diseases (A00_A09)	10	3,7			
5 Intestinal infectious diseases (A00_A09)	19	3,0	5 Human immunodeficiency virus [HIV] disease (B20_B24)	8	2,2	5 Human immunodeficiency virus [HIV] disease (B20_B24)	8	3,0			
6 Human immunodeficiency virus [HIV] disease (B20_B24)	16	2,5	6 Other bacterial diseases (A30_A49)	6	1,7	6 Covid_19 (U071_U072)	7	2,6			
7 Covid_19 (U071_U072)	12	1,9	7 Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81_C96)	5	1,4	7 Cerebral palsy and other paralytic syndromes (G80_G83)	6	2,2			
8 Episodic and paroxysmal disorders (G40_G47)	10	1,6	8 Covid_19 (U071_U072)	5	1,4	8 Episodic and paroxysmal disorders (G40_G47)	6	2,2			
9 Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81_C96)	10	1,6	9 Other forms of heart disease (I30_I52)	5	1,4	9 Chronic lower respiratory diseases (J40_J47)	6	2,2			
10 Other bacterial diseases (A30_A49)	7	1,1	10 Other viral diseases (B25_B34)	4	1,1	10 Malignant neoplasms of eye, brain and other parts of central nervous system (C69_C72)	5	1,8			
Non-natural	273	43,4	Non-natural	180	50,6	Non-natural	92	33,9			
Other Natural	195	31,0	Other Natural	98	27,5	Other Natural	92	33,9			
All causes	629	100,0	All causes	356	100,0	All causes	271	100,0			
Western Cape,15-44				Western Cape,Males,15-44				Western Cape,Females,15-44			
	No	%		No	%		No	%		No	%
1 Human immunodeficiency virus [HIV] disease (B20_B24)	1 732	14,9	1 Human immunodeficiency virus [HIV] disease (B20_B24)	777	10,2	1 Human immunodeficiency virus [HIV] disease (B20_B24)	936	23,8			
2 Tuberculosis (A15_A19)	887	7,6	2 Tuberculosis (A15_A19)	560	7,4	2 Covid_19 (U071_U072)	339	8,6			
3 Covid_19 (U071_U072)	666	5,7	3 Covid_19 (U071_U072)	325	4,3	3 Tuberculosis (A15_A19)	323	8,2			
4 Other viral diseases (B25_B34)	261	2,2	4 Ischaemic heart diseases (I20_I25)	131	1,7	4 Other viral diseases (B25_B34)	149	3,8			
5 Other forms of heart disease (I30_I52)	192	1,7	5 Other viral diseases (B25_B34)	111	1,5	5 Malignant neoplasms of breast (C50)	118	3			
6 Ischaemic heart diseases (I20_I25)	185	1,6	6 Other forms of heart disease (I30_I52)	110	1,4	6 Malignant neoplasms of female genital organs (C51_C58)	94	2,4			
7 Cerebrovascular diseases (I60_I69)	184	1,6	7 Cerebrovascular diseases (I60_I69)	99	1,3	7 Diabetes mellitus (E10_E14)	90	2,3			
8 Diabetes mellitus (E10_E14)	178	1,5	8 Influenza and pneumonia (J09_J18)	91	1,2	8 Cerebrovascular diseases (I60_I69)	85	2,2			
9 Influenza and pneumonia (J09_J18)	155	1,3	9 Malignant neoplasms of digestive organs (C15_C26)	88	1,2	9 Other forms of heart disease (I30_I52)	82	2,1			
10 Malignant neoplasms of digestive organs (C15_C26)	140	1,2	10 Diabetes mellitus (E10_E14)	87	1,1	10 Influenza and pneumonia (J09_J18)	63	1,6			
Non-natural	4 213	36,3	Non-natural	3 719	48,9	Other Natural	1 181	30			
Other Natural	2 812	24,2	Other Natural	1 514	19,9	Non-natural	477	12,1			
All causes	11 605	100,0	All causes	7 612	100,0	All causes	3 937	100,0			

Appendix M1: The ten leading underlying natural causes of death by age and sex: Western Cape, 2020 (continued)

	Western Cape, 45-64	No	%		Western Cape, Males, 45-64	No	%		Western Cape, Females, 45-64	No	%
1	COVID-19 (U071_U072)	2 529	14,6	1	COVID-19 (U071_U072)	1 397	14,2	1	COVID-19 (U071_U072)	1 129	15,2
2	Diabetes mellitus (E10_E14)	1 598	9,2	2	Ischaemic heart diseases (I20_I25)	764	7,8	2	Diabetes mellitus (E10_E14)	835	11,2
3	Ischaemic heart diseases (I20_I25)	1 227	7,1	3	Diabetes mellitus (E10_E14)	762	7,7	3	Ischaemic heart diseases (I20_I25)	461	6,2
4	Human immunodeficiency virus [HIV] disease (B20_B24)	1 011	5,8	4	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	599	6,1	4	Human immunodeficiency virus [HIV] disease (B20_B24)	436	5,8
5	Cerebrovascular diseases (I60_I69)	938	5,4	5	Human immunodeficiency virus [HIV] disease (B20_B24)	573	5,8	5	Cerebrovascular diseases (I60_I69)	429	5,7
6	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	866	5,0	6	Tuberculosis (A15_A19)	512	5,2	6	Hypertensive diseases (I10_I15)	366	4,9
7	Malignant neoplasms of digestive organs (C15_C26)	803	4,6	7	Cerebrovascular diseases (I60_I69)	508	5,2	7	Malignant neoplasms of digestive organs (C15_C26)	325	4,3
8	Tuberculosis (A15_A19)	708	4,1	8	Malignant neoplasms of digestive organs (C15_C26)	477	4,8	8	Malignant neoplasms of breast (C50)	315	4,2
9	Hypertensive diseases (I10_I15)	701	4,1	9	Chronic lower respiratory diseases (J40_J47)	423	4,3	9	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	265	3,5
10	Chronic lower respiratory diseases (J40_J47)	649	3,8	10	Hypertensive diseases (I10_I15)	335	3,4	10	Malignant neoplasms of female genital organs (C51_C58)	247	3,3
	Other natural causes	5 376	31,1		Other natural causes	2 799	28,4		Other natural causes	2 427	32,6
	Non-natural causes	889	5,1		Non-natural causes	695	7,1		Non-natural causes	191	2,5
	All causes	17 295	100,0		All causes	9 844	100,0		All causes	7 426	100,0
	Western Cape, 65+	No	%		Western Cape, Males, 45-64	No	%		Western Cape, Females, 45-64	No	%
1	COVID-19 (U071_U072)	2 998	12,2	1	COVID-19 (U071_U072)	1 472	13,1	1	Diabetes mellitus (E10_E14)	1 526	11,5
2	Diabetes mellitus (E10_E14)	2 463	10,0	2	Ischaemic heart diseases (I20_I25)	1 145	10,2	2	COVID-19 (U071_U072)	1 524	11,5
3	Ischaemic heart diseases (I20_I25)	2 382	9,7	3	Diabetes mellitus (E10_E14)	934	8,3	3	Ischaemic heart diseases (I20_I25)	1 235	9,3
4	Cerebrovascular diseases (I60_I69)	2 092	8,5	4	Cerebrovascular diseases (I60_I69)	890	7,9	4	Cerebrovascular diseases (I60_I69)	1 201	9,1
5	Hypertensive diseases (I10_I15)	1 809	7,4	5	Hypertensive diseases (I10_I15)	645	5,7	5	Hypertensive diseases (I10_I15)	1 163	8,8
6	Malignant neoplasms of digestive organs (C15_C26)	1 140	4,6	6	Malignant neoplasms of digestive organs (C15_C26)	589	5,2	6	Other forms of heart disease (I30_I52)	592	4,5
7	Other forms of heart disease (I30_I52)	1 036	4,2	7	Chronic lower respiratory diseases (J40_J47)	549	4,9	7	Malignant neoplasms of digestive organs (C15_C26)	551	4,2
8	Chronic lower respiratory diseases (J40_J47)	992	4,0	8	Malignant neoplasms of male genital organs (C60_C63)	531	4,7	8	Chronic lower respiratory diseases (J40_J47)	441	3,3
9	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	913	3,7	9	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	509	4,5	9	Malignant neoplasms of respiratory and intrathoracic organs (C30_C39)	403	3,0
10	Influenza and pneumonia (J09_J18)	669	2,7	10	Other forms of heart disease (I30_I52)	442	3,9	10	Influenza and pneumonia (J09_J18)	373	2,8
	Other natural causes	7 603	31,0		Other natural causes	3 294	29,2		Other natural causes	4 068	30,7
	Non-natural causes	461	1,9		Non-natural causes	270	2,4		Non-natural causes	190	1,4
	All causes	24 558	100,0		All causes	11 270	100,0		All causes	13 267	100,0

Appendix M2: The ten leading underlying natural causes of death by age and sex: Eastern Cape, 2020

	Eastern Cape, all ages	No	%		Eastern Cape, Males, all ages	No	%		Eastern Cape, Females, all ages	No	%
1	Covid_19 (U071_U072)	7 324	9,4	1	Covid_19 (U071_U072)	3 145	8,1	1	Covid_19 (U071_U072)	4 167	10,6
2	Diabetes mellitus (E10_E14)	5 683	7,3	2	Tuberculosis (A15_A19)	2 552	6,6	2	Diabetes mellitus (E10_E14)	3 573	9,1
3	Hypertensive diseases (I10_I15)	4 670	6,0	3	Diabetes mellitus (E10_E14)	2 105	5,4	3	Hypertensive diseases (I10_I15)	3 012	7,7
4	Tuberculosis (A15_A19)	4 149	5,3	4	Cerebrovascular diseases (I60_I69)	1 792	4,6	4	Cerebrovascular diseases (I60_I69)	2 340	6
5	Cerebrovascular diseases (I60_I69)	4 137	5,3	5	Hypertensive diseases (I10_I15)	1 652	4,3	5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 789	4,6
6	Human immunodeficiency virus [HIV] disease (B20_B24)	3 446	4,4	6	Human immunodeficiency virus [HIV] disease (B20_B24)	1 649	4,3	6	Tuberculosis (A15_A19)	1 586	4
7	Influenza and pneumonia (J09_J18)	2 839	3,6	7	Influenza and pneumonia (J09_J18)	1 404	3,6	7	Influenza and pneumonia (J09_J18)	1 429	3,6
8	Chronic lower respiratory diseases (J40_J47)	2 358	3,0	8	Chronic lower respiratory diseases (J40_J47)	1 324	3,4	8	Other forms of heart disease (I30_I52)	1 136	2,9
9	Other forms of heart disease (I30_I52)	2 048	2,6	9	Other forms of heart disease (I30_I52)	911	2,4	9	Chronic lower respiratory diseases (J40_J47)	1 031	2,6
10	Other viral diseases (B25_B34)	1 762	2,3	10	Ischaemic heart diseases (I20_I25)	887	2,3	10	Other viral diseases (B25_B34)	921	2,3
	Other Natural	32 568	41,7		Other Natural	15 729	40,7		Other Natural	16 694	42,6
	Non-natural	7 057	9,0		Non-natural	5 500	14,2		Non-natural	1 526	3,9
	All causes	78 041	100,0		All causes	38 650	100,0		All causes	39 204	100,0
	Eastern Cape, 0	No	%		Eastern Cape, Males, 0	No	%		Eastern Cape, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	182	10,9	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	92	10,5	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	81	10,8
2	Other disorders originating in the perinatal period (P90_P96)	113	6,8	2	Other disorders originating in the perinatal period (P90_P96)	61	6,9	2	Influenza and pneumonia (J09_J18)	60	8
3	Influenza and pneumonia (J09_J18)	113	6,8	3	Influenza and pneumonia (J09_J18)	53	6,0	3	Other disorders originating in the perinatal period (P90_P96)	49	6,5
4	Infections specific to the perinatal period (P35_P39)	83	5,0	4	Disorders related to length of gestation and fetal growth (P05_P08)	45	5,1	4	Infections specific to the perinatal period (P35_P39)	35	4,7
5	Disorders related to length of gestation and fetal growth (P05_P08)	81	4,9	5	Infections specific to the perinatal period (P35_P39)	44	5,0	5	Disorders related to length of gestation and fetal growth (P05_P08)	33	4,4
6	Intestinal infectious diseases (A00_A09)	71	4,3	6	Intestinal infectious diseases (A00_A09)	39	4,4	6	Intestinal infectious diseases (A00_A09)	31	4,1
7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	65	3,9	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	38	4,3	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	26	3,5
8	Congenital malformations of the circulatory system (Q20_Q28)	46	2,8	8	Congenital malformations of the circulatory system (Q20_Q28)	28	3,2	8	Metabolic disorders (E70_E90)	17	2,3
9	Other bacterial diseases (A30_A49)	30	1,8	9	Other bacterial diseases (A30_A49)	22	2,5	9	Congenital malformations of the circulatory system (Q20_Q28)	17	2,3
10	Malnutrition (E40_E46)	29	1,7	10	Malnutrition (E40_E46)	19	2,2	10	Chromosomal abnormalities, not elsewhere classified (Q90_Q99)	16	2,1
	Other Natural	764	45,9		Other Natural	390	44,4		Other Natural	345	46,1
	Non-natural	88	5,3		Non-natural	48	5,5		Non-natural	39	5,2
	All causes	1 665	100,0		All causes	879	100,0		All causes	749	100,0

Appendix M2: The ten leading underlying natural causes of death by age and sex: Eastern Cape, 2020 (continued)

	Eastern Cape, 1-14	No	%		Eastern Cape, Males, 1-14	No	%		Eastern Cape, Females, 1-14	No	%
1	Tuberculosis (A15_A19)	53	3,6	1	Intestinal infectious diseases (A00_A09)	29	3,5	1	Tuberculosis (A15_A19)	29	4,6
2	Influenza and pneumonia (J09_J18)	48	3,3	2	Episodic and paroxysmal disorders (G40_G47)	28	3,4	2	Influenza and pneumonia (J09_J18)	20	3,1
3	Episodic and paroxysmal disorders (G40_G47)	47	3,2	3	Influenza and pneumonia (J09_J18)	27	3,3	3	Episodic and paroxysmal disorders (G40_G47)	19	3
4	Intestinal infectious diseases (A00_A09)	44	3,0	4	Tuberculosis (A15_A19)	24	2,9	4	Human immunodeficiency virus [HIV] disease (B20_B24)	16	2,5
5	Human immunodeficiency virus [HIV] disease (B20_B24)	32	2,2	5	Human immunodeficiency virus [HIV] disease (B20_B24)	16	1,9	5	Other forms of heart disease (I30_I52)	16	2,5
6	Malnutrition (E40_E46)	25	1,7	6	Malnutrition (E40_E46)	14	1,7	6	Intestinal infectious diseases (A00_A09)	15	2,4
7	Inflammatory diseases of the central nervous system (G00_G09)	23	1,6	7	Metabolic disorders (E70_E90)	13	1,6	7	Inflammatory diseases of the central nervous system (G00_G09)	12	1,9
8	Other forms of heart disease (I30_I52)	23	1,6	8	Cerebral palsy and other paralytic syndromes (G80_G83)	13	1,6	8	Malnutrition (E40_E46)	11	1,7
9	Cerebral palsy and other paralytic syndromes (G80_G83)	23	1,6	9	Inflammatory diseases of the central nervous system (G00_G09)	11	1,3	9	Other viral diseases (B25_B34)	11	1,7
10	Metabolic disorders (E70_E90)	22	1,5	10	Other disorders of the nervous system (G90_G99)	10	1,2	10	Other bacterial diseases (A30_A49)	10	1,6
	Other Natural	636	43,4		Non-natural	321	38,8		Other Natural	306	48,2
	Non-natural	491	33,5		Other Natural	321	38,8		Non-natural	170	26,8
	All causes	1 467	100,0		All causes	827	100,0		All causes	635	100,0
	Eastern Cape, 15-44	No	%		Eastern Cape, Males, 15-44	No	%		Eastern Cape, Females, 15-44	No	%
	Human immunodeficiency virus [HIV] disease (B20_B24)	2 054	11,9	1	Tuberculosis (A15_A19)	1 013	10,0	1	Human immunodeficiency virus [HIV] disease (B20_B24)	1 147	16,1
2	Tuberculosis (A15_A19)	1 739	10,0	2	Human immunodeficiency virus [HIV] disease (B20_B24)	902	8,9	2	Tuberculosis (A15_A19)	722	10,2
3	Other viral diseases (B25_B34)	970	5,6	3	Other viral diseases (B25_B34)	447	4,4	3	Other viral diseases (B25_B34)	520	7,3
4	Covid_19 (U071_U072)	738	4,3	4	Covid_19 (U071_U072)	303	3,0	4	Covid_19 (U071_U072)	432	6,1
5	Influenza and pneumonia (J09_J18)	338	2,0	5	Episodic and paroxysmal disorders (G40_G47)	191	1,9	5	Influenza and pneumonia (J09_J18)	156	2,2
6	Episodic and paroxysmal disorders (G40_G47)	282	1,6	6	Influenza and pneumonia (J09_J18)	180	1,8	6	Diabetes mellitus (E10_E14)	148	2,1
7	Certain disorders involving the immune mechanism (D80_D89)	273	1,6	7	Cerebrovascular diseases (I60_I69)	131	1,3	7	Certain disorders involving the immune mechanism (D80_D89)	145	2
8	Diabetes mellitus (E10_E14)	254	1,5	8	Certain disorders involving the immune mechanism (D80_D89)	128	1,3	8	Malignant neoplasms of female genital organs (C51_C58)	114	1,6
9	Cerebrovascular diseases (I60_I69)	241	1,4	9	Other forms of heart disease (I30_I52)	119	1,2	9	Other forms of heart disease (I30_I52)	110	1,5
10	Other forms of heart disease (I30_I52)	230	1,3	10	Chronic lower respiratory diseases (J40_J47)	106	1,0	10	Cerebrovascular diseases (I60_I69)	109	1,5
	Other Natural	5 551	32,0		Non-natural	3 870	38,1		Other Natural	2 735	38,5
	Non-natural	4 659	26,9		Other Natural	2 770	27,3		Non-natural	765	10,8
	All causes	17 329	100,0		All causes	10 160	100,0		All causes	7 103	100,0

Appendix M2: The ten leading underlying natural causes of death by age and sex: Eastern Cape, 2020 (continued)

	Eastern Cape,45-64	No	%		Eastern Cape, Males, 45-64	No	%		Eastern Cape, Females, 45-64	No	%
1	Covid_19 (U071_U072)	3 199	13,5	1	Covid_19 (U071_U072)	1 382	11,1	1	Covid_19 (U071_U072)	1 810	16,2
2	Diabetes mellitus (E10_E14)	2 095	8,8	2	Tuberculosis (A15_A19)	985	7,9	2	Diabetes mellitus (E10_E14)	1 284	11,5
3	Tuberculosis (A15_A19)	1 464	6,2	3	Diabetes mellitus (E10_E14)	809	6,5	3	Hypertensive diseases (I10_I15)	689	6,2
4	Hypertensive diseases (I10_I15)	1 170	4,9	4	Human immunodeficiency virus [HIV] disease (B20_B24)	620	5,0	4	Human immunodeficiency virus [HIV] disease (B20_B24)	503	4,5
5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 124	4,7	5	Cerebrovascular diseases (I60_I69)	523	4,2	5	Cerebrovascular diseases (I60_I69)	492	4,4
6	Cerebrovascular diseases (I60_I69)	1 016	4,3	6	Chronic lower respiratory diseases (J40_J47)	491	3,9	6	Tuberculosis (A15_A19)	473	4,2
7	Influenza and pneumonia (J09_J18)	800	3,4	7	Hypertensive diseases (I10_I15)	478	3,8	7	Influenza and pneumonia (J09_J18)	361	3,2
8	Chronic lower respiratory diseases (J40_J47)	761	3,2	8	Influenza and pneumonia (J09_J18)	438	3,5	8	Other viral diseases (B25_B34)	309	2,8
9	Other viral diseases (B25_B34)	627	2,6	9	Ischaemic heart diseases (I20_I25)	319	2,6	9	Chronic lower respiratory diseases (J40_J47)	268	2,4
10	Other forms of heart disease (I30_I52)	562	2,4	10	Malignant neoplasms of digestive organs (C15_C26)	316	2,5	10	Other forms of heart disease (I30_I52)	267	2,4
	Other Natural	9 679	40,8		Other Natural	5 178	41,4		Other Natural	4 458	39,8
	Non-natural	1 234	5,2		Non-natural	956	7,7		Non-natural	273	2,4
	All causes	23 731	100,0		All causes	12 495	100,0		All causes	11 187	100,0
	Eastern Cape,64+	No	%		Eastern Cape, Males, 65+	No	%		Eastern Cape, Females, 65+	No	%
1	Covid_19 (U071_U072)	3 365	9,9	1	Covid_19 (U071_U072)	1 451	10,2	1	Hypertensive diseases (I10_I15)	2 221	11,4
2	Diabetes mellitus (E10_E14)	3 331	9,8	2	Diabetes mellitus (E10_E14)	1 189	8,3	2	Diabetes mellitus (E10_E14)	2 140	11
3	Hypertensive diseases (I10_I15)	3 317	9,8	3	Cerebrovascular diseases (I60_I69)	1 134	7,9	3	Covid_19 (U071_U072)	1 912	9,8
4	Cerebrovascular diseases (I60_I69)	2 870	8,5	4	Hypertensive diseases (I10_I15)	1 093	7,6	4	Cerebrovascular diseases (I60_I69)	1 733	8,9
5	Influenza and pneumonia (J09_J18)	1 540	4,5	5	Chronic lower respiratory diseases (J40_J47)	712	5,0	5	Influenza and pneumonia (J09_J18)	832	4,3
6	Chronic lower respiratory diseases (J40_J47)	1 386	4,1	6	Influenza and pneumonia (J09_J18)	706	4,9	6	Other forms of heart disease (I30_I52)	736	3,8
7	Other forms of heart disease (I30_I52)	1 216	3,6	7	Tuberculosis (A15_A19)	521	3,6	7	Chronic lower respiratory diseases (J40_J47)	674	3,5
8	Ischaemic heart diseases (I20_I25)	978	2,9	8	Ischaemic heart diseases (I20_I25)	493	3,5	8	Ischaemic heart diseases (I20_I25)	485	2,5
9	Tuberculosis (A15_A19)	878	2,6	9	Other forms of heart disease (I30_I52)	480	3,4	9	Malignant neoplasms of digestive organs (C15_C26)	373	1,9
10	Malignant neoplasms of digestive organs (C15_C26)	710	2,1	10	Malignant neoplasms of male genital organs (C60_C63)	436	3,1	10	Tuberculosis (A15_A19)	357	1,8
	Other Natural	13 673	40,4		Other Natural	5 769	40,4		Other Natural	7 788	39,9
	Non-natural	585	1,7		Non-natural	305	2,1		Non-natural	279	1,4
	All causes	33 849	100,0		All causes	14 289	100,0		All causes	19 530	100,0

Appendix M3: The ten leading underlying natural causes of death by age and sex: Northern Cape, 2020

	Northern Cape, all ages	No	%		Northern Cape, Males, all ages	No	%		Northern Cape, Females, all ages	No	%
1	Hypertensive diseases (I10_I15)	923	6,2	1	Tuberculosis (A15_A19)	460	5,9	1	Hypertensive diseases (I10_I15)	557	7,8
2	Human immunodeficiency virus [HIV] disease (B20_B24)	869	5,8	2	Human immunodeficiency virus [HIV] disease (B20_B24)	440	5,7	2	Diabetes mellitus (E10_E14)	498	6,9
3	Cerebrovascular diseases (I60_I69)	857	5,7	3	Covid_19 (U071_U072)	402	5,2	3	Cerebrovascular diseases (I60_I69)	474	6,6
4	Diabetes mellitus (E10_E14)	790	5,3	4	Cerebrovascular diseases (I60_I69)	383	4,9	4	Human immunodeficiency virus [HIV] disease (B20_B24)	427	6
5	Covid_19 (U071_U072)	772	5,2	5	Hypertensive diseases (I10_I15)	365	4,7	5	Covid_19 (U071_U072)	370	5,2
6	Tuberculosis (A15_A19)	723	4,8	6	Influenza and pneumonia (J09_J18)	326	4,2	6	Influenza and pneumonia (J09_J18)	299	4,2
7	Influenza and pneumonia (J09_J18)	626	4,2	7	Ischaemic heart diseases (I20_I25)	293	3,8	7	Tuberculosis (A15_A19)	260	3,6
8	Ischaemic heart diseases (I20_I25)	526	3,5	8	Diabetes mellitus (E10_E14)	292	3,8	8	Ischaemic heart diseases (I20_I25)	233	3,2
9	Chronic lower respiratory diseases (J40_J47)	453	3,0	9	Chronic lower respiratory diseases (J40_J47)	252	3,2	9	Other viral diseases (B25_B34)	228	3,2
10	Other viral diseases (B25_B34)	440	2,9	10	Other viral diseases (B25_B34)	212	2,7	10	Chronic lower respiratory diseases (J40_J47)	201	2,8
	Other Natural	6 784	45,3		Other Natural	3 447	44,4		Other Natural	3 314	46,2
	Non-natural	1 199	8,0		Non-natural	885	11,4		Non-natural	312	4,3
	All causes	14 962	100,0		All causes	7 757	100,0		All causes	7 173	100,0
	Northern Cape, 0	No	%		Northern Cape, Males, 0	No	%		Northern Cape, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	127	16,8	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	72	17,9	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	53	15,4
2	Other disorders originating in the perinatal period (P90_P96)	86	11,3	2	Other disorders originating in the perinatal period (P90_P96)	55	13,6	2	Other disorders originating in the perinatal period (P90_P96)	30	8,7
3	Disorders related to length of gestation and fetal growth (P05_P08)	60	7,9	3	Disorders related to length of gestation and fetal growth (P05_P08)	35	8,7	3	Intestinal infectious diseases (A00_A09)	26	7,5
4	Influenza and pneumonia (J09_J18)	48	6,3	4	Infections specific to the perinatal period (P35_P39)	26	6,5	4	Disorders related to length of gestation and fetal growth (P05_P08)	25	7,2
5	Intestinal infectious diseases (A00_A09)	42	5,5	5	Influenza and pneumonia (J09_J18)	24	6,0	5	Influenza and pneumonia (J09_J18)	24	7
6	Infections specific to the perinatal period (P35_P39)	41	5,4	6	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	19	4,7	6	Infections specific to the perinatal period (P35_P39)	13	3,8
7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	32	4,2	7	Intestinal infectious diseases (A00_A09)	15	3,7	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	11	3,2
8	Metabolic disorders (E70_E90)	17	2,2	8	Metabolic disorders (E70_E90)	10	2,5	8	Congenital malformations of the circulatory system (Q20_Q28)	9	2,6
9	Congenital malformations of the circulatory system (Q20_Q28)	16	2,1	9	Other bacterial diseases (A30_A49)	9	2,2	9	Malnutrition (E40_E46)	8	2,3
10	Other bacterial diseases (A30_A49)	16	2,1	10	Malnutrition (E40_E46)	7	1,7	10	Other bacterial diseases (A30_A49)	7	2
	Other Natural	259	34,2		Other Natural	125	31,0		Other Natural	131	38
	Non-natural	14	1,8		Non-natural	6	1,5		Non-natural	8	2,3
	All causes	758	100,0		All causes	403	100,0		All causes	345	100,0

Appendix M3: The ten leading underlying natural causes of death by age and sex: Northern Cape, 2020 (concluded)

	Northern Cape,1-14	No	%		Northern Cape,Males, 1-14	No	%		Northern Cape, Females, 1-14	No	%
1	Malnutrition (E40_E46)	26	7,1	1	Malnutrition (E40_E46)	13	6,7	1	Malnutrition (E40_E46)	13	7,8
2	Intestinal infectious diseases (A00_A09)	20	5,5	2	Intestinal infectious diseases (A00_A09)	9	4,6	2	Intestinal infectious diseases (A00_A09)	11	6,6
3	Metabolic disorders (E70_E90)	12	3,3	3	Cerebral palsy and other paralytic syndromes (G80_G83)	8	4,1	3	Metabolic disorders (E70_E90)	8	4,8
4	Influenza and pneumonia (J09_J18)	12	3,3	4	Human immunodeficiency virus [HIV] disease (B20_B24)	7	3,6	4	Other acute lower respiratory infections (J20_J22)	6	3,6
5	Human immunodeficiency virus [HIV] disease (B20_B24)	12	3,3	5	Influenza and pneumonia (J09_J18)	6	3,1	5	Tuberculosis (A15_A19)	6	3,6
6	Cerebral palsy and other paralytic syndromes (G80_G83)	12	3,3	6	Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81_C96)	5	2,6	6	Influenza and pneumonia (J09_J18)	5	3
7	Tuberculosis (A15_A19)	11	3,0	7	Other viral diseases (B25_B34)	5	2,6	7	Human immunodeficiency virus [HIV] disease (B20_B24)	4	2,4
8	Other viral diseases (B25_B34)	7	1,9	8	Tuberculosis (A15_A19)	5	2,6	8	Cerebral palsy and other paralytic syndromes (G80_G83)	4	2,4
9	Other acute lower respiratory infections (J20_J22)	7	1,9	9	Metabolic disorders (E70_E90)	4	2,1	9	Other bacterial diseases (A30_A49)	3	1,8
10	Other bacterial diseases (A30_A49)	6	1,6	10	Other bacterial diseases (A30_A49)	3	1,5	10	Inflammatory diseases of the central nervous system (G00_G09)	3	1,8
	Other Natural	129	35,2		Non-natural	72	36,9		Other Natural	64	38,3
	Non-natural	112	30,6		Other Natural	58	29,7		Non-natural	40	24
	All causes	366	100,0		All causes	195	100,0		All causes	167	100,0
	Northern Cape,15-44	No	%		Northern Cape,Males, 15-44	No	%		Northern Cape, Females, 15-44	No	%
1	Human immunodeficiency virus [HIV] disease (B20_B24)	502	14,3	1	Human immunodeficiency virus [HIV] disease (B20_B24)	236	12,0	1	Human immunodeficiency virus [HIV] disease (B20_B24)	265	17,2
2	Tuberculosis (A15_A19)	336	9,6	2	Tuberculosis (A15_A19)	201	10,3	2	Other viral diseases (B25_B34)	138	9
3	Other viral diseases (B25_B34)	238	6,8	3	Other viral diseases (B25_B34)	100	5,1	3	Tuberculosis (A15_A19)	132	8,6
4	Certain disorders involving the immune mechanism (D80_D89)	151	4,3	4	Certain disorders involving the immune mechanism (D80_D89)	77	3,9	4	Certain disorders involving the immune mechanism (D80_D89)	74	4,8
5	Influenza and pneumonia (J09_J18)	110	3,1	5	Influenza and pneumonia (J09_J18)	59	3,0	5	Covid_19 (U071_U072)	54	3,5
6	Covid_19 (U071_U072)	104	3,0	6	Covid_19 (U071_U072)	50	2,6	6	Influenza and pneumonia (J09_J18)	51	3,3
7	Diabetes mellitus (E10_E14)	51	1,5	7	Episodic and paroxysmal disorders (G40_G47)	33	1,7	7	Hypertensive diseases (I10_I15)	28	1,8
8	Cerebrovascular diseases (I60_I69)	50	1,4	8	Cerebrovascular diseases (I60_I69)	30	1,5	8	Diabetes mellitus (E10_E14)	26	1,7
9	Hypertensive diseases (I10_I15)	48	1,4	9	Diabetes mellitus (E10_E14)	25	1,3	9	Malignant neoplasms of female genital organs (C51_C58)	26	1,7
10	Episodic and paroxysmal disorders (G40_G47)	44	1,3	10	Other acute lower respiratory infections (J20_J22)	25	1,3	10	Malignant neoplasms of breast (C50)	23	1,5
	Other Natural	1 162	33,1		Other Natural	571	29,1		Other Natural	563	36,6
	Non-natural	712	20,3		Non-natural	552	28,2		Non-natural	158	10,3
	All causes	3 508	100,0		All causes	1 959	100,0		All causes	1 538	100,0

Appendix M3: The ten leading underlying natural causes of death by age and sex: Northern Cape, 2020 (concluded)

	Northern Cape, 45-64	No	%		Northern Cape, Males, 45-64	No	%		Northern Cape, Females, 45-64	No	%
1	Covid_19 (U071_U072)	356	7,3	1	Covid_19 (U071_U072)	206	7,5	1	Diabetes mellitus (E10_E14)	180	8,5
2	Human immunodeficiency virus [HIV] disease (B20_B24)	303	6,2	2	Tuberculosis (A15_A19)	195	7,1	2	Covid_19 (U071_U072)	150	7
3	Diabetes mellitus (E10_E14)	286	5,8	3	Human immunodeficiency virus [HIV] disease (B20_B24)	173	6,3	3	Hypertensive diseases (I10_I15)	144	6,8
4	Tuberculosis (A15_A19)	283	5,8	4	Cerebrovascular diseases (I60_I69)	142	5,1	4	Cerebrovascular diseases (I60_I69)	130	6,1
5	Cerebrovascular diseases (I60_I69)	272	5,6	5	Ischaemic heart diseases (I20_I25)	117	4,2	5	Human immunodeficiency virus [HIV] disease (B20_B24)	130	6,1
6	Hypertensive diseases (I10_I15)	256	5,2	6	Influenza and pneumonia (J09_J18)	116	4,2	6	Tuberculosis (A15_A19)	88	4,1
7	Influenza and pneumonia (J09_J18)	200	4,1	7	Hypertensive diseases (I10_I15)	111	4,0	7	Influenza and pneumonia (J09_J18)	84	3,9
8	Ischaemic heart diseases (I20_I25)	186	3,8	8	Diabetes mellitus (E10_E14)	106	3,8	8	Malignant neoplasms of female genital organs (C51_C58)	75	3,5
9	Chronic lower respiratory diseases (J40_J47)	170	3,5	9	Chronic lower respiratory diseases (J40_J47)	100	3,6	9	Chronic lower respiratory diseases (J40_J47)	70	3,3
10	Other viral diseases (B25_B34)	142	2,9	10	Other viral diseases (B25_B34)	86	3,1	10	Ischaemic heart diseases (I20_I25)	69	3,2
11	Other Natural	2 186	44,6	11	Other Natural	1 216	44,1	11	Other Natural	946	44,4
12	Non-natural	256	5,2	12	Non-natural	192	7,0	12	Non-natural	64	3
	All causes	4 896	100,0		All causes	2 760	100,0		All causes	2 130	100,0
	Northern Cape, 65+	No	%		Northern Cape, Males, 65+	No	%		Northern Cape, Females, 65+	No	%
1	Hypertensive diseases (I10_I15)	617	11,4	1	Hypertensive diseases (I10_I15)	234	9,6	1	Hypertensive diseases (I10_I15)	383	12,8
2	Cerebrovascular diseases (I60_I69)	531	9,8	2	Cerebrovascular diseases (I60_I69)	209	8,6	2	Cerebrovascular diseases (I60_I69)	322	10,8
3	Diabetes mellitus (E10_E14)	451	8,3	3	Diabetes mellitus (E10_E14)	161	6,6	3	Diabetes mellitus (E10_E14)	290	9,7
4	Covid_19 (U071_U072)	309	5,7	4	Ischaemic heart diseases (I20_I25)	155	6,4	4	Covid_19 (U071_U072)	165	5,5
5	Ischaemic heart diseases (I20_I25)	307	5,6	5	Covid_19 (U071_U072)	144	5,9	5	Ischaemic heart diseases (I20_I25)	152	5,1
6	Influenza and pneumonia (J09_J18)	256	4,7	6	Chronic lower respiratory diseases (J40_J47)	133	5,5	6	Influenza and pneumonia (J09_J18)	135	4,5
7	Chronic lower respiratory diseases (J40_J47)	247	4,5	7	Malignant neoplasms of male genital organs (C60_C63)	126	5,2	7	Other forms of heart disease (I30_I52)	120	4
8	Other forms of heart disease (I30_I52)	198	3,6	8	Influenza and pneumonia (J09_J18)	121	5,0	8	Chronic lower respiratory diseases (J40_J47)	114	3,8
9	Malignant neoplasms of male genital organs (C60_C63)	126	2,3	9	Other forms of heart disease (I30_I52)	78	3,2	9	Malignant neoplasms of digestive organs (C15_C26)	49	1,6
10	Malignant neoplasms of digestive organs (C15_C26)	109	2,0	10	Malignant neoplasms of digestive organs (C15_C26)	60	2,5	10	Malignant neoplasms of breast (C50)	48	1,6
11	Other Natural	2 178	40,1	11	Other Natural	956	39,2	11	Other Natural	1 173	39,2
12	Non-natural	105	1,9	12	Non-natural	63	2,6	12	Non-natural	42	1,4
	All causes	5 434	100,0		All causes	2 440	100,0		All causes	2 993	100,0

Appendix M4: The ten leading underlying natural causes of death by age and sex: Free State, 2020

	Free State,all ages	No	%		Free State,Males, all ages	No	%		Free State, Females, all ages	No	%
1	Covid_19 (U071_U072)	2 167	6,8	1	Covid_19 (U071_U072)	996	6,2	1	Hypertensive diseases (I10_I15)	1 335	8,5
2	Hypertensive diseases (I10_I15)	2 151	6,8	2	Influenza and pneumonia (J09_J18)	881	5,5	2	Diabetes mellitus (E10_E14)	1 280	8,2
3	Diabetes mellitus (E10_E14)	1 980	6,2	3	Human immunodeficiency virus [HIV] disease (B20_B24)	865	5,4	3	Covid_19 (U071_U072)	1 170	7,5
4	Cerebrovascular diseases (I60_I69)	1 777	5,6	4	Hypertensive diseases (I10_I15)	812	5,1	4	Cerebrovascular diseases (I60_I69)	983	6,3
5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 712	5,4	5	Cerebrovascular diseases (I60_I69)	792	4,9	5	Human immunodeficiency virus [HIV] disease (B20_B24)	839	5,3
6	Influenza and pneumonia (J09_J18)	1 689	5,3	6	Tuberculosis (A15_A19)	721	4,5	6	Influenza and pneumonia (J09_J18)	807	5,1
7	Other forms of heart disease (I30_I52)	1 258	4,0	7	Diabetes mellitus (E10_E14)	699	4,4	7	Other forms of heart disease (I30_I52)	686	4,4
8	Tuberculosis (A15_A19)	1 135	3,6	8	Other forms of heart disease (I30_I52)	569	3,6	8	Other viral diseases (B25_B34)	465	3
9	Other viral diseases (B25_B34)	932	2,9	9	Other viral diseases (B25_B34)	463	2,9	9	Tuberculosis (A15_A19)	410	2,6
10	Ischaemic heart diseases (I20_I25)	769	2,4	10	Chronic lower respiratory diseases (J40_J47)	436	2,7	10	Malignant neoplasms of female genital organs (C51_C58)	365	2,3
	Other Natural	13 596	42,8		Other Natural	6 793	42,4		Other Natural	6 727	42,9
	Non-natural	2 635	8,3		Non-natural	1 981	12,4		Non-natural	630	4
	All causes	31 801	100,0		All causes	16 008	100,0		All causes	15 697	100,0
	Free State,0	No	%		Free State,Males, 0	No	%		Free State, Females, all ages	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	257	17,6	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	141	18,5	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	111	16,5
2	Infections specific to the perinatal period (P35_P39)	128	8,8	2	Other disorders originating in the perinatal period (P90_P96)	65	8,5	2	Infections specific to the perinatal period (P35_P39)	62	9,2
3	Other disorders originating in the perinatal period (P90_P96)	107	7,3	3	Infections specific to the perinatal period (P35_P39)	65	8,5	3	Disorders related to length of gestation and fetal growth (P05_P08)	41	6,1
4	Disorders related to length of gestation and fetal growth (P05_P08)	95	6,5	4	Disorders related to length of gestation and fetal growth (P05_P08)	51	6,7	4	Other disorders originating in the perinatal period (P90_P96)	37	5,5
5	Influenza and pneumonia (J09_J18)	76	5,2	5	Influenza and pneumonia (J09_J18)	39	5,1	5	Influenza and pneumonia (J09_J18)	37	5,5
6	Intestinal infectious diseases (A00_A09)	67	4,6	6	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	37	4,9	6	Intestinal infectious diseases (A00_A09)	32	4,8
7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	59	4,0	7	Intestinal infectious diseases (A00_A09)	34	4,5	7	Malnutrition (E40_E46)	27	4
8	Malnutrition (E40_E46)	53	3,6	8	Malnutrition (E40_E46)	25	3,3	8	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	22	3,3
9	Other bacterial diseases (A30_A49)	35	2,4	9	Congenital malformations of the circulatory system (Q20_Q28)	16	2,1	9	Other bacterial diseases (A30_A49)	20	3
10	Congenital malformations of the circulatory system (Q20_Q28)	31	2,1	10	Digestive system disorders of fetus and newborn (P75_P78)	16	2,1	10	Haemorrhagic and haematological disorders of fetus and newborn (P50_P61)	17	2,5
	Other Natural	503	34,5		Other Natural	252	33,1		Other Natural	243	36,1
	Non-natural	46	3,2		Non-natural	21	2,8		Non-natural	24	3,6
	All causes	1 457	100,0		All causes	762	100,0		All causes	673	100,0

Appendix M4: The ten leading underlying natural causes of death by age and sex: Free State, 2020 (continued)

	Free State,1-14	No	%		Free State,Males, 1-14	No	%		Free State, Females, 1-14	No	%
1	Intestinal infectious diseases (A00_A09)	28	4,8	1	Intestinal infectious diseases (A00_A09)	14	4,4	1	Influenza and pneumonia (J09_J18)	16	6,1
2	Influenza and pneumonia (J09_J18)	25	4,3	2	Human immunodeficiency virus [HIV] disease (B20_B24)	11	3,4	2	Intestinal infectious diseases (A00_A09)	14	5,3
3	Malnutrition (E40_E46)	20	3,4	3	Other forms of heart disease (I30_I52)	11	3,4	3	Malnutrition (E40_E46)	10	3,8
4	Other forms of heart disease (I30_I52)	18	3,1	4	Metabolic disorders (E70_E90)	10	3,1	4	Cerebral palsy and other paralytic syndromes (G80_G83)	9	3,4
5	Cerebral palsy and other paralytic syndromes (G80_G83)	17	2,9	5	Episodic and paroxysmal disorders (G40_G47)	9	2,8	5	Other forms of heart disease (I30_I52)	7	2,7
6	Episodic and paroxysmal disorders (G40_G47)	16	2,7	6	Malnutrition (E40_E46)	9	2,8	6	Episodic and paroxysmal disorders (G40_G47)	7	2,7
7	Human immunodeficiency virus [HIV] disease (B20_B24)	15	2,6	7	Influenza and pneumonia (J09_J18)	9	2,8	7	Covid_19 (U071_U072)	6	2,3
8	Metabolic disorders (E70_E90)	13	2,2	8	Certain disorders involving the immune mechanism (D80_D89)	8	2,5	8	Other acute lower respiratory infections (J20_J22)	6	2,3
9	Tuberculosis (A15_A19)	12	2,1	9	Cerebral palsy and other paralytic syndromes (G80_G83)	8	2,5	9	Tuberculosis (A15_A19)	5	1,9
10	Inflammatory diseases of the central nervous system (G00_G09)	11	1,9	10	Tuberculosis (A15_A19)	7	2,2	10	Human immunodeficiency virus [HIV] disease (B20_B24)	4	1,5
	Other Natural	234	40,0		Other Natural	117	36,6		Other Natural	111	42,2
	Non-natural	176	30,1		Non-natural	107	33,4		Non-natural	68	25,9
	All causes	585	100,0		All causes	320	100,0		All causes	263	100,0
	Free State,15-44	No	%		Free State,Males, 15-44	No	%		Free State, Females, 15-44	No	%
1	Human immunodeficiency virus [HIV] disease (B20_B24)	913	12,7	1	Human immunodeficiency virus [HIV] disease (B20_B24)	423	10,3	1	Human immunodeficiency virus [HIV] disease (B20_B24)	484	16
2	Tuberculosis (A15_A19)	535	7,4	2	Tuberculosis (A15_A19)	311	7,6	2	Other viral diseases (B25_B34)	238	7,9
3	Other viral diseases (B25_B34)	460	6,4	3	Other viral diseases (B25_B34)	219	5,3	3	Tuberculosis (A15_A19)	222	7,3
4	Influenza and pneumonia (J09_J18)	328	4,6	4	Influenza and pneumonia (J09_J18)	193	4,7	4	Covid_19 (U071_U072)	140	4,6
5	Certain disorders involving the immune mechanism (D80_D89)	264	3,7	5	Certain disorders involving the immune mechanism (D80_D89)	137	3,3	5	Influenza and pneumonia (J09_J18)	134	4,4
6	Covid_19 (U071_U072)	247	3,4	6	Covid_19 (U071_U072)	107	2,6	6	Certain disorders involving the immune mechanism (D80_D89)	127	4,2
7	Other forms of heart disease (I30_I52)	139	1,9	7	Other forms of heart disease (I30_I52)	75	1,8	7	Malignant neoplasms of female genital organs (C51_C58)	85	2,8
8	Diabetes mellitus (E10_E14)	136	1,9	8	Diabetes mellitus (E10_E14)	65	1,6	8	Diabetes mellitus (E10_E14)	71	2,3
9	Cerebrovascular diseases (I60_I69)	131	1,8	9	Cerebrovascular diseases (I60_I69)	65	1,6	9	Cerebrovascular diseases (I60_I69)	65	2,1
10	Hypertensive diseases (I10_I15)	103	1,4	10	Episodic and paroxysmal disorders (G40_G47)	55	1,3	10	Other forms of heart disease (I30_I52)	64	2,1
	Other Natural	2 292	31,9		Non-natural	1 305	31,7		Other Natural	1 080	35,7
	Non-natural	1 644	22,9		Other Natural	1 162	28,2		Non-natural	319	10,5
	All causes	7 192	100,0		All causes	4 117	100,0		All causes	3 029	100,0

Appendix M4: The ten leading underlying natural causes of death by age and sex: Free State, 2020 (continued)

	Free State, 45-64	No	%		Free State, Males, 45-64	No	%		Free State, Females, 45-64	No	%
1	Covid_19 (U071_U072)	866	8,8	1	Covid_19 (U071_U072)	430	7,8	1	Covid_19 (U071_U072)	435	10,1
2	Diabetes mellitus (E10_E14)	682	6,9	2	Human immunodeficiency virus [HIV] disease (B20_B24)	357	6,5	2	Diabetes mellitus (E10_E14)	421	9,7
3	Human immunodeficiency virus [HIV] disease (B20_B24)	642	6,5	3	Tuberculosis (A15_A19)	299	5,5	3	Hypertensive diseases (I10_I15)	298	6,9
4	Hypertensive diseases (I10_I15)	579	5,9	4	Influenza and pneumonia (J09_J18)	297	5,4	4	Human immunodeficiency virus [HIV] disease (B20_B24)	283	6,5
5	Cerebrovascular diseases (I60_I69)	550	5,6	5	Cerebrovascular diseases (I60_I69)	289	5,3	5	Cerebrovascular diseases (I60_I69)	261	6
6	Influenza and pneumonia (J09_J18)	494	5,0	6	Hypertensive diseases (I10_I15)	279	5,1	6	Influenza and pneumonia (J09_J18)	197	4,6
7	Tuberculosis (A15_A19)	415	4,2	7	Diabetes mellitus (E10_E14)	261	4,8	7	Other viral diseases (B25_B34)	182	4,2
8	Other viral diseases (B25_B34)	374	3,8	8	Other forms of heart disease (I30_I52)	193	3,5	8	Other forms of heart disease (I30_I52)	170	3,9
9	Other forms of heart disease (I30_I52)	366	3,7	9	Other viral diseases (B25_B34)	191	3,5	9	Malignant neoplasms of female genital organs (C51_C58)	153	3,5
10	Ischaemic heart diseases (I20_I25)	234	2,4	10	Chronic lower respiratory diseases (J40_J47)	167	3,0	10	Tuberculosis (A15_A19)	114	2,6
	Other Natural	4 094	41,7		Other Natural	2 307	42,1		Other Natural	1 694	39,2
	Non-natural	525	5,3		Non-natural	409	7,5		Non-natural	115	2,7
	All causes	9 821	100,0		All causes	5 479	100,0		All causes	4 323	100,0
	Free State, 65+	No	%		Free State, Males, 65+	No	%		Free State, Females, 65+	No	%
1	Hypertensive diseases (I10_I15)	1 463	11,5	1	Hypertensive diseases (I10_I15)	484	9,1	1	Hypertensive diseases (I10_I15)	978	13,2
2	Diabetes mellitus (E10_E14)	1 157	9,1	2	Covid_19 (U071_U072)	452	8,5	2	Diabetes mellitus (E10_E14)	784	10,6
3	Cerebrovascular diseases (I60_I69)	1 085	8,5	3	Cerebrovascular diseases (I60_I69)	431	8,1	3	Cerebrovascular diseases (I60_I69)	653	8,8
4	Covid_19 (U071_U072)	1 039	8,2	4	Diabetes mellitus (E10_E14)	372	7,0	4	Covid_19 (U071_U072)	587	7,9
5	Influenza and pneumonia (J09_J18)	766	6,0	5	Influenza and pneumonia (J09_J18)	343	6,4	5	Other forms of heart disease (I30_I52)	439	5,9
6	Other forms of heart disease (I30_I52)	722	5,7	6	Other forms of heart disease (I30_I52)	283	5,3	6	Influenza and pneumonia (J09_J18)	423	5,7
7	Ischaemic heart diseases (I20_I25)	483	3,8	7	Ischaemic heart diseases (I20_I25)	232	4,4	7	Ischaemic heart diseases (I20_I25)	250	3,4
8	Chronic lower respiratory diseases (J40_J47)	379	3,0	8	Chronic lower respiratory diseases (J40_J47)	230	4,3	8	Renal failure (N17_N19)	154	2,1
9	Renal failure (N17_N19)	285	2,2	9	Malignant neoplasms of male genital organs (C60_C63)	189	3,5	9	Chronic lower respiratory diseases (J40_J47)	149	2
10	Malignant neoplasms of digestive organs (C15_C26)	256	2,0	10	Malignant neoplasms of digestive organs (C15_C26)	131	2,5	10	Malignant neoplasms of female genital organs (C51_C58)	127	1,7
	Other Natural	4 867	38,2		Other Natural	2 044	38,3		Other Natural	2 761	37,3
	Non-natural	244	1,9		Non-natural	139	2,6		Non-natural	104	1,4
	All causes	12 746	100,0		All causes	5 330	100,0		All causes	7 409	100,0

Appendix M5: The ten leading underlying natural causes of death by age and sex: KwaZulu-Natal, 2020

	KwaZulu-Natal, all ages	No	%		KwaZulu-Natal, Males, all ages	No	%		KwaZulu-Natal, Females, all ages	No	%
1	Diabetes mellitus (E10_E14)	6 968	7,4	1	Covid_19 (U071_U072)	2 808	6,0	1	Diabetes mellitus (E10_E14)	4 541	9,6
2	Covid_19 (U071_U072)	6 107	6,5	2	Tuberculosis (A15_A19)	2 527	5,4	2	Cerebrovascular diseases (I60_I69)	3 464	7,3
3	Cerebrovascular diseases (I60_I69)	5 709	6,0	3	Diabetes mellitus (E10_E14)	2 422	5,2	3	Covid_19 (U071_U072)	3 294	6,9
4	Tuberculosis (A15_A19)	4 206	4,4	4	Cerebrovascular diseases (I60_I69)	2 239	4,8	4	Hypertensive diseases (I10_I15)	2 745	5,8
5	Hypertensive diseases (I10_I15)	4 040	4,3	5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 860	4,0	5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 893	4
6	Human immunodeficiency virus [HIV] disease (B20_B24)	3 760	4,0	6	Ischaemic heart diseases (I20_I25)	1 592	3,4	6	Tuberculosis (A15_A19)	1 664	3,5
7	Influenza and pneumonia (J09_J18)	3 113	3,3	7	Influenza and pneumonia (J09_J18)	1 523	3,3	7	Other forms of heart disease (I30_I52)	1 661	3,5
8	Ischaemic heart diseases (I20_I25)	2 936	3,1	8	Hypertensive diseases (I10_I15)	1 294	2,8	8	Influenza and pneumonia (J09_J18)	1 585	3,3
9	Other forms of heart disease (I30_I52)	2 887	3,1	9	Other forms of heart disease (I30_I52)	1 225	2,6	9	Ischaemic heart diseases (I20_I25)	1 343	2,8
10	Other viral diseases (B25_B34)	2 353	2,5	10	Other viral diseases (B25_B34)	1 173	2,5	10	Other viral diseases (B25_B34)	1 171	2,5
	Other Natural	41 886	44,3		Other Natural	19 796	42,3		Other Natural	21 981	46,2
	Non-natural	10 617	11,2		Non-natural	8 352	17,8		Non-natural	2 195	4,6
	All causes	94 582	100,0		All causes	46 811	100,0		All causes	47 537	100,0
	KwaZulu-Natal, 0	No	%		KwaZulu-Natal, Males, 0	No	%		KwaZulu-Natal, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	482	14,1	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	267	14,4	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	211	14
2	Disorders related to length of gestation and fetal growth (P05_P08)	358	10,5	2	Disorders related to length of gestation and fetal growth (P05_P08)	191	10,3	2	Disorders related to length of gestation and fetal growth (P05_P08)	159	10,6
3	Other disorders originating in the perinatal period (P90_P96)	318	9,3	3	Other disorders originating in the perinatal period (P90_P96)	191	10,3	3	Other disorders originating in the perinatal period (P90_P96)	121	8
4	Infections specific to the perinatal period (P35_P39)	216	6,3	4	Intestinal infectious diseases (A00_A09)	122	6,6	4	Infections specific to the perinatal period (P35_P39)	94	6,2
5	Intestinal infectious diseases (A00_A09)	213	6,2	5	Infections specific to the perinatal period (P35_P39)	119	6,4	5	Intestinal infectious diseases (A00_A09)	91	6
6	Influenza and pneumonia (J09_J18)	143	4,2	6	Influenza and pneumonia (J09_J18)	82	4,4	6	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	63	4,2
7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	128	3,8	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	60	3,2	7	Influenza and pneumonia (J09_J18)	60	4
8	Other bacterial diseases (A30_A49)	95	2,8	8	Other bacterial diseases (A30_A49)	54	2,9	8	Other bacterial diseases (A30_A49)	41	2,7
9	Other congenital malformations (Q80_Q89)	70	2,1	9	Congenital malformations of the circulatory system (Q20_Q28)	40	2,2	9	Other congenital malformations (Q80_Q89)	32	2,1
10	Haemorrhagic and haematological disorders of fetus and newborn (P50_P61)	65	1,9	10	Haemorrhagic and haematological disorders of fetus and newborn (P50_P61)	35	1,9	10	Chromosomal abnormalities, not elsewhere classified (Q90_Q99)	31	2,1
	Other Natural	1 199	35,1		Other Natural	639	34,4		Other Natural	536	35,6
	Non-natural	125	3,7		Non-natural	56	3,0		Non-natural	67	4,4
	All causes	3 412	100,0		All causes	1 856	100,0		All causes	1 506	100,0

Appendix M5: The ten leading underlying natural causes of death by age and sex: KwaZulu-Natal, 2020 (continued)

	KwaZulu-Natal, 1-14	No	%		KwaZulu-Natal, Males, 1-14	No	%		KwaZulu-Natal, Females, 1-14	No	%
1	Intestinal infectious diseases (A00_A09)	120	5,7	1	Intestinal infectious diseases (A00_A09)	60	5,1	1	Intestinal infectious diseases (A00_A09)	60	6,6
2	Influenza and pneumonia (J09_J18)	92	4,4	2	Influenza and pneumonia (J09_J18)	44	3,7	2	Influenza and pneumonia (J09_J18)	47	5,2
3	Tuberculosis (A15_A19)	63	3,0	3	Tuberculosis (A15_A19)	33	2,8	3	Tuberculosis (A15_A19)	30	3,3
4	Other forms of heart disease (I30_I52)	42	2,0	4	Cerebral palsy and other paralytic syndromes (G80_G83)	23	2,0	4	Other bacterial diseases (A30_A49)	21	2,3
5	Cerebral palsy and other paralytic syndromes (G80_G83)	42	2,0	5	Other forms of heart disease (I30_I52)	21	1,8	5	Other forms of heart disease (I30_I52)	21	2,3
6	Other bacterial diseases (A30_A49)	40	1,9	6	Other bacterial diseases (A30_A49)	19	1,6	6	Other viral diseases (B25_B34)	21	2,3
7	Metabolic disorders (E70_E90)	31	1,5	7	Metabolic disorders (E70_E90)	19	1,6	7	Cerebral palsy and other paralytic syndromes (G80_G83)	18	2
8	Malnutrition (E40_E46)	30	1,4	8	Human immunodeficiency virus [HIV] disease (B20_B24)	18	1,5	8	Episodic and paroxysmal disorders (G40_G47)	17	1,9
9	Episodic and paroxysmal disorders (G40_G47)	29	1,4	9	Inflammatory diseases of the central nervous system (G00_G09)	16	1,4	9	Malnutrition (E40_E46)	14	1,5
10	Human immunodeficiency virus [HIV] disease (B20_B24)	28	1,3	10	Malnutrition (E40_E46)	16	1,4	10	Metabolic disorders (E70_E90)	12	1,3
	Other Natural	871	41,6		Non-natural	455	38,7		Other Natural	401	44,2
	Non-natural	705	33,7		Other Natural	452	38,4		Non-natural	246	27,1
	All causes	2 093	100,0		All causes	1 176	100,0		All causes	908	100,0
	KwaZulu-Natal, 15-44	No	%		KwaZulu-Natal, Males, 15-44	No	%		KwaZulu-Natal, Females, 15-44	No	%
1	Human immunodeficiency virus [HIV] disease (B20_B24)	2 210	9,3	1	Tuberculosis (A15_A19)	1 233	8,5	1	Human immunodeficiency virus [HIV] disease (B20_B24)	1 149	12,7
2	Tuberculosis (A15_A19)	2 137	9,0	2	Human immunodeficiency virus [HIV] disease (B20_B24)	1 055	7,3	2	Tuberculosis (A15_A19)	896	9,9
3	Other viral diseases (B25_B34)	1 316	5,6	3	Other viral diseases (B25_B34)	639	4,4	3	Other viral diseases (B25_B34)	674	7,4
4	Covid_19 (U071_U072)	802	3,4	4	Covid_19 (U071_U072)	390	2,7	4	Covid_19 (U071_U072)	411	4,5
5	Influenza and pneumonia (J09_J18)	591	2,5	5	Influenza and pneumonia (J09_J18)	287	2,0	5	Malignant neoplasms of female genital organs (C51_C58)	303	3,3
6	Other forms of heart disease (I30_I52)	358	1,5	6	Other forms of heart disease (I30_I52)	187	1,3	6	Influenza and pneumonia (J09_J18)	302	3,3
7	Renal failure (N17_N19)	324	1,4	7	Renal failure (N17_N19)	178	1,2	7	Other forms of heart disease (I30_I52)	171	1,9
8	Cerebrovascular diseases (I60_I69)	319	1,3	8	Cerebrovascular diseases (I60_I69)	174	1,2	8	Diabetes mellitus (E10_E14)	156	1,7
9	Malignant neoplasms of female genital organs (C51_C58)	303	1,3	9	Episodic and paroxysmal disorders (G40_G47)	155	1,1	9	Renal failure (N17_N19)	146	1,6
10	Diabetes mellitus (E10_E14)	301	1,3	10	Other acute lower respiratory infections (J20_J22)	150	1,0	10	Cerebrovascular diseases (I60_I69)	145	1,6
	Other Natural	7 938	33,5		Non-natural	5 945	41,0		Other Natural	3 645	40,2
	Non-natural	7 072	29,9		Other Natural	4 099	28,3		Non-natural	1 076	11,9
	All causes	23 671	100,0		All causes	14 492	100,0		All causes	9 074	100,0

Appendix M5: The ten leading underlying natural causes of death by age and sex: KwaZulu-Natal, 2020 (continued)

	KwaZulu-Natal, 45-64	No	%		KwaZulu-Natal, Males, 45-64	No	%		KwaZulu-Natal, Females, 45-64	No	%
1	Covid_19 (U071_U072)	2 614	9,7	1	Covid_19 (U071_U072)	1 237	8,7	1	Diabetes mellitus (E10_E14)	1 421	11,3
2	Diabetes mellitus (E10_E14)	2 403	9,0	2	Diabetes mellitus (E10_E14)	980	6,9	2	Covid_19 (U071_U072)	1 373	11
3	Cerebrovascular diseases (I60_I69)	1 404	5,2	3	Tuberculosis (A15_A19)	887	6,2	3	Cerebrovascular diseases (I60_I69)	674	5,4
4	Tuberculosis (A15_A19)	1 353	5,0	4	Cerebrovascular diseases (I60_I69)	729	5,1	4	Hypertensive diseases (I10_I15)	590	4,7
5	Human immunodeficiency virus [HIV] disease (B20_B24)	1 226	4,6	5	Human immunodeficiency virus [HIV] disease (B20_B24)	637	4,5	5	Human immunodeficiency virus [HIV] disease (B20_B24)	588	4,7
6	Hypertensive diseases (I10_I15)	990	3,7	6	Ischaemic heart diseases (I20_I25)	587	4,1	6	Malignant neoplasms of female genital organs (C51_C58)	511	4,1
7	Ischaemic heart diseases (I20_I25)	911	3,4	7	Influenza and pneumonia (J09_J18)	485	3,4	7	Tuberculosis (A15_A19)	463	3,7
8	Influenza and pneumonia (J09_J18)	876	3,3	8	Other viral diseases (B25_B34)	425	3,0	8	Influenza and pneumonia (J09_J18)	391	3,1
9	Other viral diseases (B25_B34)	801	3,0	9	Other forms of heart disease (I30_I52)	406	2,9	9	Other forms of heart disease (I30_I52)	379	3
10	Other forms of heart disease (I30_I52)	785	2,9	10	Hypertensive diseases (I10_I15)	400	2,8	10	Other viral diseases (B25_B34)	370	3
	Other Natural	11 554	43,1		Other Natural	6 015	42,2		Other Natural	5 337	42,6
	Non-natural	1 900	7,1		Non-natural	1 456	10,2		Non-natural	433	3,5
	All causes	26 817	100,0		All causes	14 244	100,0		All causes	12 530	100,0
	KwaZulu-Natal, 65+	No	%		KwaZulu-Natal, Males, 65+	No	%		KwaZulu-Natal, Females, 65+	No	%
1	Diabetes mellitus (E10_E14)	4 253	11,0	1	Cerebrovascular diseases (I60_I69)	1 310	8,7	1	Diabetes mellitus (E10_E14)	2 957	12,6
2	Cerebrovascular diseases (I60_I69)	3 943	10,2	2	Diabetes mellitus (E10_E14)	1 295	8,6	2	Cerebrovascular diseases (I60_I69)	2 628	11,2
3	Hypertensive diseases (I10_I15)	2 879	7,5	3	Covid_19 (U071_U072)	1 171	7,8	3	Hypertensive diseases (I10_I15)	2 065	8,8
4	Covid_19 (U071_U072)	2 668	6,9	4	Ischaemic heart diseases (I20_I25)	895	5,9	4	Covid_19 (U071_U072)	1 497	6,4
5	Ischaemic heart diseases (I20_I25)	1 861	4,8	5	Hypertensive diseases (I10_I15)	813	5,4	5	Other forms of heart disease (I30_I52)	1 082	4,6
6	Other forms of heart disease (I30_I52)	1 688	4,4	6	Influenza and pneumonia (J09_J18)	625	4,2	6	Ischaemic heart diseases (I20_I25)	966	4,1
7	Influenza and pneumonia (J09_J18)	1 411	3,7	7	Other forms of heart disease (I30_I52)	605	4,0	7	Influenza and pneumonia (J09_J18)	785	3,3
8	Chronic lower respiratory diseases (J40_J47)	784	2,0	8	Chronic lower respiratory diseases (J40_J47)	447	3,0	8	Other bacterial diseases (A30_A49)	403	1,7
9	Malignant neoplasms of digestive organs (C15_C26)	760	2,0	9	Malignant neoplasms of digestive organs (C15_C26)	420	2,8	9	Renal failure (N17_N19)	397	1,7
10	Renal failure (N17_N19)	742	1,9	10	Malignant neoplasms of male genital organs (C60_C63)	404	2,7	10	Other acute lower respiratory infections (J20_J22)	345	1,5
	Other Natural	16 785	43,5		Other Natural	6 618	44,0		Other Natural	10 021	42,6
	Non-natural	815	2,1		Non-natural	440	2,9		Non-natural	373	1,6
	All causes	38 589	100,0		All causes	15 043	100,0		All causes	23 519	100,0

Appendix M6: The ten leading underlying natural causes of death by age and sex: North West, 2020

	North West,all ages	No	%		North West,Males, all ages	No	%		North West, Females, all ages	No	%
1	Hypertensive diseases (I10_I15)	1 990	6,5	1	Tuberculosis (A15_A19)	927	5,8	1	Hypertensive diseases (I10_I15)	1 218	8,5
2	Diabetes mellitus (E10_E14)	1 685	5,5	2	Hypertensive diseases (I10_I15)	770	4,8	2	Diabetes mellitus (E10_E14)	996	7
3	Cerebrovascular diseases (I60_I69)	1 506	4,9	3	Influenza and pneumonia (J09_J18)	752	4,7	3	Cerebrovascular diseases (I60_I69)	803	5,6
4	Tuberculosis (A15_A19)	1 447	4,7	4	Cerebrovascular diseases (I60_I69)	701	4,4	4	Influenza and pneumonia (J09_J18)	611	4,3
5	Influenza and pneumonia (J09_J18)	1 367	4,5	5	Diabetes mellitus (E10_E14)	686	4,3	5	Human immunodeficiency virus [HIV] disease (B20_B24)	593	4,1
6	Other viral diseases (B25_B34)	1 196	3,9	6	Other viral diseases (B25_B34)	643	4,0	6	Other viral diseases (B25_B34)	545	3,8
7	Human immunodeficiency virus [HIV] disease (B20_B24)	1 189	3,9	7	Human immunodeficiency virus [HIV] disease (B20_B24)	593	3,7	7	Other forms of heart disease (I30_I52)	544	3,8
8	Other forms of heart disease (I30_I52)	1 052	3,4	8	Covid_19 (U071_U072)	513	3,2	8	Tuberculosis (A15_A19)	507	3,5
9	Covid_19 (U071_U072)	1 019	3,3	9	Other forms of heart disease (I30_I52)	505	3,1	9	Covid_19 (U071_U072)	502	3,5
10	Ischaemic heart diseases (I20_I25)	609	2,0	10	Chronic lower respiratory diseases (J40_J47)	377	2,3	10	Malignant neoplasms of female genital organs (C51_C58)	320	2,2
	Other Natural	14 926	48,9		Other Natural	7 702	47,8		Other Natural	7 066	49,4
	Non-natural	2 559	8,4		Non-natural	1 939	12,0		Non-natural	587	4,1
	All causes	30 545	100,0		All causes	16 108	100,0		All causes	14 292	100,0
	North West,0	No	%		North West,Males, 0	No	%		North West, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	286	15,2	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	159	15,5	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	126	15
2	Other disorders originating in the perinatal period (P90_P96)	215	11,4	2	Other disorders originating in the perinatal period (P90_P96)	130	12,7	2	Infections specific to the perinatal period (P35_P39)	81	9,6
3	Infections specific to the perinatal period (P35_P39)	166	8,8	3	Infections specific to the perinatal period (P35_P39)	85	8,3	3	Other disorders originating in the perinatal period (P90_P96)	77	9,2
4	Disorders related to length of gestation and fetal growth (P05_P08)	132	7,0	4	Disorders related to length of gestation and fetal growth (P05_P08)	83	8,1	4	Disorders related to length of gestation and fetal growth (P05_P08)	47	5,6
5	Intestinal infectious diseases (A00_A09)	110	5,8	5	Intestinal infectious diseases (A00_A09)	63	6,1	5	Intestinal infectious diseases (A00_A09)	47	5,6
6	Influenza and pneumonia (J09_J18)	86	4,6	6	Influenza and pneumonia (J09_J18)	50	4,9	6	Influenza and pneumonia (J09_J18)	36	4,3
7	Malnutrition (E40_E46)	59	3,1	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	32	3,1	7	Malnutrition (E40_E46)	34	4
8	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	55	2,9	8	Malnutrition (E40_E46)	25	2,4	8	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	23	2,7
9	Metabolic disorders (E70_E90)	40	2,1	9	Metabolic disorders (E70_E90)	20	2,0	9	Metabolic disorders (E70_E90)	20	2,4
10	Other bacterial diseases (A30_A49)	34	1,8	10	Other congenital malformations (Q80_Q89)	20	2,0	10	Other acute lower respiratory infections (J20_J22)	19	2,3
	Other Natural	648	34,4		Other Natural	329	32,1		Other Natural	306	36,4
	Non-natural	53	2,8		Non-natural	29	2,8		Non-natural	24	2,9
	All causes	1 884	100,0		All causes	1 025	100,0		All causes	840	100,0

Appendix M6: The ten leading underlying natural causes of death by age and sex: North West, 2020 (continued)

	North West, 1-14	No	%		North West, Males, 1-14	No	%		North West, Females, 1-14	No	%
1	Malnutrition (E40_E46)	65	8,2	1	Malnutrition (E40_E46)	39	9,3	1	Malnutrition (E40_E46)	25	6,9
2	Intestinal infectious diseases (A00_A09)	56	7,1	2	Intestinal infectious diseases (A00_A09)	31	7,4	2	Intestinal infectious diseases (A00_A09)	25	6,9
3	Influenza and pneumonia (J09_J18)	48	6,1	3	Influenza and pneumonia (J09_J18)	26	6,2	3	Influenza and pneumonia (J09_J18)	22	6
4	Tuberculosis (A15_A19)	27	3,4	4	Tuberculosis (A15_A19)	11	2,6	4	Tuberculosis (A15_A19)	16	4,4
5	Other viral diseases (B25_B34)	20	2,5	5	Other viral diseases (B25_B34)	11	2,6	5	Other bacterial diseases (A30_A49)	10	2,7
6	Other bacterial diseases (A30_A49)	17	2,2	6	Metabolic disorders (E70_E90)	9	2,1	6	Cerebral palsy and other paralytic syndromes (G80_G83)	10	2,7
7	Metabolic disorders (E70_E90)	17	2,2	7	Other forms of heart disease (I30_I52)	8	1,9	7	Inflammatory diseases of the central nervous system (G00_G09)	9	2,5
8	Inflammatory diseases of the central nervous system (G00_G09)	13	1,6	8	Other bacterial diseases (A30_A49)	7	1,7	8	Other viral diseases (B25_B34)	9	2,5
9	Cerebral palsy and other paralytic syndromes (G80_G83)	13	1,6	9	Other disorders of the nervous system (G90_G99)	6	1,4	9	Metabolic disorders (E70_E90)	8	2,2
10	Episodic and paroxysmal disorders (G40_G47)	13	1,6	10	Other diseases of the respiratory system (J95_J99)	6	1,4	10	Episodic and paroxysmal disorders (G40_G47)	7	1,9
	Other Natural	306	38,8		Other Natural	147	34,9		Other Natural	149	40,9
	Non-natural	194	24,6		Non-natural	120	28,5		Non-natural	74	20,3
	All causes	789	100,0		All causes	421	100,0		All causes	364	100,0
	North West, 15-44	No	%		North West, Males, 15-44	No	%		North West, Females, 15-44	No	%
1	Tuberculosis (A15_A19)	655	9,0	1	Tuberculosis (A15_A19)	377	9,0	1	Human immunodeficiency virus [HIV] disease (B20_B24)	315	10,5
2	Human immunodeficiency virus [HIV] disease (B20_B24)	619	8,5	2	Other viral diseases (B25_B34)	310	7,4	2	Other viral diseases (B25_B34)	291	9,7
3	Other viral diseases (B25_B34)	606	8,3	3	Human immunodeficiency virus [HIV] disease (B20_B24)	304	7,2	3	Tuberculosis (A15_A19)	270	9
4	Influenza and pneumonia (J09_J18)	281	3,9	4	Influenza and pneumonia (J09_J18)	146	3,5	4	Influenza and pneumonia (J09_J18)	132	4,4
5	Certain disorders involving the immune mechanism (D80_D89)	178	2,5	5	Certain disorders involving the immune mechanism (D80_D89)	92	2,2	5	Certain disorders involving the immune mechanism (D80_D89)	85	2,8
6	Covid_19 (U071_U072)	139	1,9	6	Episodic and paroxysmal disorders (G40_G47)	77	1,8	6	Malignant neoplasms of female genital organs (C51_C58)	73	2,4
7	Diabetes mellitus (E10_E14)	118	1,6	7	Diabetes mellitus (E10_E14)	72	1,7	7	Covid_19 (U071_U072)	71	2,4
8	Other bacterial diseases (A30_A49)	115	1,6	8	Covid_19 (U071_U072)	66	1,6	8	Other forms of heart disease (I30_I52)	59	2
9	Other forms of heart disease (I30_I52)	114	1,6	9	Cerebrovascular diseases (I60_I69)	63	1,5	9	Other bacterial diseases (A30_A49)	57	1,9
10	Episodic and paroxysmal disorders (G40_G47)	110	1,5	10	Other bacterial diseases (A30_A49)	57	1,4	10	Hypertensive diseases (I10_I15)	56	1,9
	Other Natural	2 650	36,5		Other Natural	1 326	31,5		Other Natural	1 246	41,7
	Non-natural	1 673	23,1		Non-natural	1 313	31,2		Non-natural	335	11,2
	All causes	7 258	100,0		All causes	4 203	100,0		All causes	2 990	100,0

Appendix M6: The ten leading underlying natural causes of death by age and sex: North West, 2020 (continued)

	North West,45-64	No	%		North West,Males, 45-64	No	%		North West, Females, 45-64	No	%
1	Diabetes mellitus (E10_E14)	593	6,5	1	Tuberculosis (A15_A19)	386	7,4	1	Diabetes mellitus (E10_E14)	331	8,6
2	Tuberculosis (A15_A19)	542	6,0	2	Diabetes mellitus (E10_E14)	261	5,0	2	Hypertensive diseases (I10_I15)	249	6,5
3	Human immunodeficiency virus [HIV] disease (B20_B24)	484	5,3	3	Other viral diseases (B25_B34)	260	5,0	3	Human immunodeficiency virus [HIV] disease (B20_B24)	235	6,1
4	Hypertensive diseases (I10_I15)	472	5,2	4	Covid_19 (U071_U072)	256	4,9	4	Covid_19 (U071_U072)	201	5,2
5	Other viral diseases (B25_B34)	460	5,1	5	Human immunodeficiency virus [HIV] disease (B20_B24)	247	4,8	5	Other viral diseases (B25_B34)	197	5,1
6	Covid_19 (U071_U072)	458	5,0	6	Cerebrovascular diseases (I60_I69)	228	4,4	6	Cerebrovascular diseases (I60_I69)	192	5
7	Cerebrovascular diseases (I60_I69)	421	4,6	7	Influenza and pneumonia (J09_J18)	227	4,4	7	Malignant neoplasms of female genital organs (C51_C58)	163	4,2
8	Influenza and pneumonia (J09_J18)	364	4,0	8	Hypertensive diseases (I10_I15)	222	4,3	8	Tuberculosis (A15_A19)	151	3,9
9	Other forms of heart disease (I30_I52)	286	3,1	9	Other forms of heart disease (I30_I52)	166	3,2	9	Influenza and pneumonia (J09_J18)	137	3,6
10	Chronic lower respiratory diseases (J40_J47)	219	2,4	10	Ischaemic heart diseases (I20_I25)	145	2,8	10	Other forms of heart disease (I30_I52)	118	3,1
	Other Natural	4 334	47,7		Other Natural	2 439	46,9		Other Natural	1 785	46,5
	Non-natural	448	4,9		Non-natural	360	6,9		Non-natural	80	2,1
	All causes	9 081	100,0		All causes	5 197	100,0		All causes	3 839	100,0
	North West,65+	No	%		North West,Males, 65+	No	%		North West, Females, 65+	No	%
1	Hypertensive diseases (I10_I15)	1 423	12,3	1	Hypertensive diseases (I10_I15)	509	9,7	1	Hypertensive diseases (I10_I15)	913	14,6
2	Diabetes mellitus (E10_E14)	968	8,4	2	Cerebrovascular diseases (I60_I69)	406	7,7	2	Diabetes mellitus (E10_E14)	617	9,9
3	Cerebrovascular diseases (I60_I69)	966	8,4	3	Diabetes mellitus (E10_E14)	350	6,7	3	Cerebrovascular diseases (I60_I69)	560	8,9
4	Other forms of heart disease (I30_I52)	638	5,5	4	Influenza and pneumonia (J09_J18)	303	5,8	4	Other forms of heart disease (I30_I52)	362	5,8
5	Influenza and pneumonia (J09_J18)	588	5,1	5	Other forms of heart disease (I30_I52)	275	5,2	5	Influenza and pneumonia (J09_J18)	284	4,5
6	Covid_19 (U071_U072)	411	3,6	6	Chronic lower respiratory diseases (J40_J47)	212	4,0	6	Covid_19 (U071_U072)	225	3,6
7	Ischaemic heart diseases (I20_I25)	342	3,0	7	Malignant neoplasms of male genital organs (C60_C63)	204	3,9	7	Ischaemic heart diseases (I20_I25)	154	2,5
8	Chronic lower respiratory diseases (J40_J47)	332	2,9	8	Ischaemic heart diseases (I20_I25)	187	3,6	8	Chronic lower respiratory diseases (J40_J47)	120	1,9
9	Renal failure (N17_N19)	240	2,1	9	Covid_19 (U071_U072)	185	3,5	9	Renal failure (N17_N19)	117	1,9
10	Malignant neoplasms of digestive organs (C15_C26)	222	1,9	10	Tuberculosis (A15_A19)	147	2,8	10	Malignant neoplasms of digestive organs (C15_C26)	110	1,8
	Other Natural	5 212	45,2		Other Natural	2 367	45,0		Other Natural	2 723	43,5
	Non-natural	191	1,7		Non-natural	117	2,2		Non-natural	74	1,2
	All causes	11 533	100,0		All causes	5 262	100,0		All causes	6 259	100,0

Appendix M7: The ten leading underlying natural causes of death by age and sex: Gauteng, 2020

	Gauteng, all ages	No	%		Gauteng, Males, all ages	No	%		Gauteng, Females, all ages	No	%
1	Covid_19 (U071_U072)	7 575	7,0	1	Covid_19 (U071_U072)	3 989	7,1	1	Covid_19 (U071_U072)	3 566	6,9
2	Diabetes mellitus (E10_E14)	5 525	5,1	2	Influenza and pneumonia (J09_J18)	2 377	4,2	2	Diabetes mellitus (E10_E14)	3 136	6,1
3	Cerebrovascular diseases (I60_I69)	5 141	4,7	3	Diabetes mellitus (E10_E14)	2 377	4,2	3	Cerebrovascular diseases (I60_I69)	2 788	5,4
4	Influenza and pneumonia (J09_J18)	4 516	4,1	4	Cerebrovascular diseases (I60_I69)	2 321	4,1	4	Hypertensive diseases (I10_I15)	2 682	5,2
5	Hypertensive diseases (I10_I15)	4 366	4,0	5	Ischaemic heart diseases (I20_I25)	2 265	4,0	5	Influenza and pneumonia (J09_J18)	2 090	4,1
6	Ischaemic heart diseases (I20_I25)	3 847	3,5	6	Tuberculosis (A15_A19)	1 917	3,4	6	Other forms of heart disease (I30_I52)	1 896	3,7
7	Other forms of heart disease (I30_I52)	3 715	3,4	7	Other forms of heart disease (I30_I52)	1 806	3,2	7	Ischaemic heart diseases (I20_I25)	1 572	3,1
8	Tuberculosis (A15_A19)	3 064	2,8	8	Hypertensive diseases (I10_I15)	1 673	3,0	8	Other viral diseases (B25_B34)	1 228	2,4
9	Human immunodeficiency virus [HIV] disease (B20_B24)	2 566	2,4	9	Human immunodeficiency virus [HIV] disease (B20_B24)	1 320	2,3	9	Human immunodeficiency virus [HIV] disease (B20_B24)	1 218	2,4
10	Other viral diseases (B25_B34)	2 556	2,3	10	Malignant neoplasms of digestive organs (C15_C26)	1 316	2,3	10	Malignant neoplasms of female genital organs (C51_C58)	1 208	2,3
	Other Natural	55 338	50,8		Other Natural	27 002	47,7		Other Natural	27 828	54,1
	Non-natural	10 722	9,8		Non-natural	8 192	14,5		Non-natural	2 200	4,3
	All causes	108 931	100,0		All causes	56 555	100,0		All causes	51 412	100,0
	Gauteng, 0	No	%		Gauteng, Males, 0	No	%		Gauteng, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	852	15,4	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	478	16,1	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	357	14,7
2	Other disorders originating in the perinatal period (P90_P96)	606	11,0	2	Infections specific to the perinatal period (P35_P39)	330	11,1	2	Other disorders originating in the perinatal period (P90_P96)	264	10,9
3	Infections specific to the perinatal period (P35_P39)	556	10,1	3	Other disorders originating in the perinatal period (P90_P96)	325	10,9	3	Infections specific to the perinatal period (P35_P39)	219	9,0
4	Disorders related to length of gestation and fetal growth (P05_P08)	445	8,1	4	Disorders related to length of gestation and fetal growth (P05_P08)	223	7,5	4	Disorders related to length of gestation and fetal growth (P05_P08)	209	8,6
5	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	210	3,8	5	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	110	3,7	5	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	95	3,9
6	Influenza and pneumonia (J09_J18)	207	3,7	6	Influenza and pneumonia (J09_J18)	109	3,7	6	Influenza and pneumonia (J09_J18)	93	3,8
7	Other bacterial diseases (A30_A49)	171	3,1	7	Other bacterial diseases (A30_A49)	90	3,0	7	Other bacterial diseases (A30_A49)	77	3,2
8	Congenital malformations of the circulatory system (Q20_Q28)	167	3,0	8	Congenital malformations of the circulatory system (Q20_Q28)	88	3,0	8	Congenital malformations of the circulatory system (Q20_Q28)	76	3,1
9	Intestinal infectious diseases (A00_A09)	123	2,2	9	Intestinal infectious diseases (A00_A09)	64	2,1	9	Chromosomal abnormalities, not elsewhere classified (Q90_Q99)	56	2,3
10	Other diseases of the respiratory system (J95_J99)	122	2,2	10	Haemorrhagic and haematological disorders of fetus and newborn (P50_P61)	63	2,1	10	Digestive system disorders of fetus and newborn (P75_P78)	56	2,3
	Other Natural	1 908	34,5		Other Natural	1 015	34,1		Other Natural	857	35,3
	Non-natural	159	2,9		Non-natural	82	2,8		Non-natural	70	2,9
	All causes	5 526	100,0		All causes	2 977	100,0		All causes	2 429	100,0

Appendix M7: The ten leading underlying natural causes of death by age and sex: Gauteng, 2020 (continued)

	Gauteng, 1-14	No	%		Gauteng, Males, 1-14	No	%		Gauteng, Females, 1-14	No	%
1	Influenza and pneumonia (J09_J18)	83	3,9	1	Influenza and pneumonia (J09_J18)	36	3,2	1	Influenza and pneumonia (J09_J18)	46	4,7
2	Intestinal infectious diseases (A00_A09)	60	2,8	2	Intestinal infectious diseases (A00_A09)	30	2,7	2	Intestinal infectious diseases (A00_A09)	30	3,1
3	Other forms of heart disease (I30_I52)	50	2,4	3	Cerebral palsy and other paralytic syndromes (G80_G83)	27	2,4	3	Other diseases of the respiratory system (J95_J99)	28	2,9
4	Cerebral palsy and other paralytic syndromes (G80_G83)	48	2,3	4	Episodic and paroxysmal disorders (G40_G47)	27	2,4	4	Other bacterial diseases (A30_A49)	25	2,6
5	Other diseases of the respiratory system (J95_J99)	48	2,3	5	Other forms of heart disease (I30_I52)	26	2,3	5	Other forms of heart disease (I30_I52)	24	2,5
6	Other bacterial diseases (A30_A49)	45	2,1	6	Other bacterial diseases (A30_A49)	20	1,8	6	Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81_C96)	24	2,5
7	Episodic and paroxysmal disorders (G40_G47)	43	2,0	7	Other disorders of the nervous system (G90_G99)	20	1,8	7	Cerebral palsy and other paralytic syndromes (G80_G83)	21	2,2
8	Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81_C96)	38	1,8	8	Other diseases of the respiratory system (J95_J99)	20	1,8	8	Episodic and paroxysmal disorders (G40_G47)	16	1,6
9	Tuberculosis (A15_A19)	31	1,5	9	Tuberculosis (A15_A19)	16	1,4	9	Congenital malformations of the circulatory system (Q20_Q28)	15	1,5
10	Other disorders of the nervous system (G90_G99)	29	1,4	10	Human immunodeficiency virus [HIV] disease (B20_B24)	15	1,3	10	Tuberculosis (A15_A19)	15	1,5
	Other Natural	945	44,8		Other Natural	478	42,8		Other Natural	445	45,9
	Non-natural	691	32,7		Non-natural	402	36,0		Non-natural	281	29,0
	All causes	2 111	100,0		All causes	1 117	100,0		All causes	970	100,0
	Gauteng, 15-44	No	%		Gauteng, Males, 15-44	No	%		Gauteng, Females, 15-144	No	%
1	Tuberculosis (A15_A19)	1 615	6,2	1	Tuberculosis (A15_A19)	953	6,1	1	Human immunodeficiency virus [HIV] disease (B20_B24)	712	7,3
2	Human immunodeficiency virus [HIV] disease (B20_B24)	1 426	5,5	2	Human immunodeficiency virus [HIV] disease (B20_B24)	692	4,4	2	Other viral diseases (B25_B34)	697	7,1
3	Other viral diseases (B25_B34)	1 383	5,3	3	Other viral diseases (B25_B34)	670	4,3	3	Tuberculosis (A15_A19)	641	6,6
4	Covid_19 (U071_U072)	980	3,8	4	Influenza and pneumonia (J09_J18)	574	3,7	4	Covid_19 (U071_U072)	452	4,6
5	Influenza and pneumonia (J09_J18)	966	3,7	5	Covid_19 (U071_U072)	519	3,3	5	Influenza and pneumonia (J09_J18)	368	3,8
6	Other forms of heart disease (I30_I52)	543	2,1	6	Other forms of heart disease (I30_I52)	317	2,0	6	Malignant neoplasms of female genital organs (C51_C58)	313	3,2
7	Other diseases of the respiratory system (J95_J99)	511	2,0	7	Other diseases of the respiratory system (J95_J99)	279	1,8	7	Other diseases of the respiratory system (J95_J99)	224	2,3
8	Cerebrovascular diseases (I60_I69)	461	1,8	8	Cerebrovascular diseases (I60_I69)	253	1,6	8	Other forms of heart disease (I30_I52)	218	2,2
9	Certain disorders involving the immune mechanism (D80_D89)	426	1,6	9	Certain disorders involving the immune mechanism (D80_D89)	223	1,4	9	Certain disorders involving the immune mechanism (D80_D89)	200	2,0
10	Other bacterial diseases (A30_A49)	392	1,5	10	Renal failure (N17_N19)	216	1,4	10	Cerebrovascular diseases (I60_I69)	198	2,0
	Other Natural	10 324	39,8		Non-natural	5 654	36,2		Other Natural	4 735	48,5
	Non-natural	6 898	26,6		Other Natural	5 286	33,8		Non-natural	1 014	10,4
	All causes	25 925	100,0		All causes	15 636	100,0		All causes	9 772	100,0

Appendix M7: The ten leading underlying natural causes of death by age and sex: Gauteng, 2020 (continued)

	Gauteng, 45-64	No	%		Gauteng, Males, 45-64	No	%		Gauteng, Females, 45-64	No	%
1	Covid_19 (U071_U072)	2 879	9,1	1	Covid_19 (U071_U072)	1 609	9,1	1	Covid_19 (U071_U072)	1 262	9,1
2	Diabetes mellitus (E10_E14)	2 004	6,3	2	Diabetes mellitus (E10_E14)	964	5,5	2	Diabetes mellitus (E10_E14)	1 038	7,5
3	Cerebrovascular diseases (I60_I69)	1 366	4,3	3	Ischaemic heart diseases (I20_I25)	796	4,5	3	Cerebrovascular diseases (I60_I69)	618	4,4
4	Influenza and pneumonia (J09_J18)	1 193	3,8	4	Cerebrovascular diseases (I60_I69)	733	4,1	4	Hypertensive diseases (I10_I15)	595	4,3
5	Ischaemic heart diseases (I20_I25)	1 144	3,6	5	Tuberculosis (A15_A19)	720	4,1	5	Malignant neoplasms of female genital organs (C51_C58)	532	3,8
6	Hypertensive diseases (I10_I15)	1 136	3,6	6	Influenza and pneumonia (J09_J18)	701	4,0	6	Influenza and pneumonia (J09_J18)	479	3,4
7	Tuberculosis (A15_A19)	1 062	3,3	7	Other forms of heart disease (I30_I52)	621	3,5	7	Malignant neoplasms of breast (C50)	448	3,2
8	Other forms of heart disease (I30_I52)	1 050	3,3	8	Malignant neoplasms of digestive organs (C15_C26)	554	3,1	8	Other forms of heart disease (I30_I52)	427	3,1
9	Other viral diseases (B25_B34)	948	3,0	9	Hypertensive diseases (I10_I15)	539	3,0	9	Other viral diseases (B25_B34)	421	3,0
10	Human immunodeficiency virus [HIV] disease (B20_B24)	941	3,0	10	Human immunodeficiency virus [HIV] disease (B20_B24)	526	3,0	10	Human immunodeficiency virus [HIV] disease (B20_B24)	410	2,9
	Other Natural	15 987	50,3		Other Natural	8 328	47,1		Other Natural	7 253	52,2
	Non-natural	2 069	6,5		Non-natural	1 582	9,0		Non-natural	421	3,0
	All causes	31 779	100,0		All causes	17 673	100,0		All causes	13 904	100,0
	Gauteng, 65+	No	%		Gauteng, Males, 65+	No	%		Gauteng, Females, 65+	No	%
1	Covid_19 (U071_U072)	3 674	8,4	1	Covid_19 (U071_U072)	1 840	9,6	1	Hypertensive diseases (I10_I15)	1 950	8,0
2	Cerebrovascular diseases (I60_I69)	3 271	7,5	2	Cerebrovascular diseases (I60_I69)	1 318	6,9	2	Cerebrovascular diseases (I60_I69)	1 947	8,0
3	Diabetes mellitus (E10_E14)	3 149	7,2	3	Ischaemic heart diseases (I20_I25)	1 314	6,9	3	Diabetes mellitus (E10_E14)	1 927	7,9
4	Hypertensive diseases (I10_I15)	2 950	6,8	4	Diabetes mellitus (E10_E14)	1 215	6,3	4	Covid_19 (U071_U072)	1 831	7,5
5	Ischaemic heart diseases (I20_I25)	2 467	5,7	5	Hypertensive diseases (I10_I15)	993	5,2	5	Other forms of heart disease (I30_I52)	1 208	5,0
6	Influenza and pneumonia (J09_J18)	2 067	4,7	6	Influenza and pneumonia (J09_J18)	957	5,0	6	Ischaemic heart diseases (I20_I25)	1 152	4,7
7	Other forms of heart disease (I30_I52)	2 032	4,7	7	Other forms of heart disease (I30_I52)	821	4,3	7	Influenza and pneumonia (J09_J18)	1 104	4,5
8	Chronic lower respiratory diseases (J40_J47)	1 234	2,8	8	Malignant neoplasms of male genital organs (C60_C63)	726	3,8	8	Malignant neoplasms of digestive organs (C15_C26)	586	2,4
9	Malignant neoplasms of digestive organs (C15_C26)	1 221	2,8	9	Chronic lower respiratory diseases (J40_J47)	682	3,6	9	Chronic lower respiratory diseases (J40_J47)	550	2,3
10	Renal failure (N17_N19)	1 053	2,4	10	Malignant neoplasms of digestive organs (C15_C26)	632	3,3	10	Renal failure (N17_N19)	538	2,2
	Other Natural	19 567	44,9		Other Natural	8 182	42,7		Other Natural	11 130	45,7
	Non-natural	905	2,1		Non-natural	472	2,5		Non-natural	414	1,7
	All causes	43 590	100,0		All causes	19 152	100,0		All causes	24 337	100,0

Appendix M8: The ten leading underlying natural causes of death by age and sex: Mpumalanga, 2020

	Mpumalanga,all ages	No	%		Mpumalanga,Males, all ages	No	%		Mpumalanga, Females, all ages	No	%
1	Diabetes mellitus (E10_E14)	1 970	6,6	1	Tuberculosis (A15_A19)	826	5,4	1	Diabetes mellitus (E10_E14)	1 164	8,1
2	Cerebrovascular diseases (I60_I69)	1 772	5,9	2	Influenza and pneumonia (J09_J18)	821	5,3	2	Cerebrovascular diseases (I60_I69)	986	6,8
3	Influenza and pneumonia (J09_J18)	1 596	5,3	3	Diabetes mellitus (E10_E14)	802	5,2	3	Hypertensive diseases (I10_I15)	914	6,3
4	Hypertensive diseases (I10_I15)	1 473	4,9	4	Cerebrovascular diseases (I60_I69)	783	5,1	4	Influenza and pneumonia (J09_J18)	772	5,4
5	Tuberculosis (A15_A19)	1 306	4,4	5	Human immunodeficiency virus [HIV] disease (B20_B24)	622	4,1	5	Human immunodeficiency virus [HIV] disease (B20_B24)	586	4,1
6	Human immunodeficiency virus [HIV] disease (B20_B24)	1 208	4,0	6	Hypertensive diseases (I10_I15)	557	3,6	6	Other viral diseases (B25_B34)	563	3,9
7	Other viral diseases (B25_B34)	1 081	3,6	7	Ischaemic heart diseases (I20_I25)	520	3,4	7	Ischaemic heart diseases (I20_I25)	556	3,9
8	Ischaemic heart diseases (I20_I25)	1 077	3,6	8	Other viral diseases (B25_B34)	516	3,4	8	Other forms of heart disease (I30_I52)	540	3,7
9	Other forms of heart disease (I30_I52)	1 016	3,4	9	Other forms of heart disease (I30_I52)	475	3,1	9	Tuberculosis (A15_A19)	477	3,3
10	Covid_19 (U071_U072)	749	2,5	10	Covid_19 (U071_U072)	407	2,7	10	Malignant neoplasms of female genital organs (C51_C58)	399	2,8
	Other Natural	13 721	45,9		Other Natural	6 784	44,2		Other Natural	6 817	47,3
	Non-natural	2 896	9,7		Non-natural	2 245	14,6		Non-natural	634	4,4
	All causes	29 865	100,0		All causes	15 358	100,0		All causes	14 408	100,0
	Mpumalanga,0	No	%		Mpumalanga,Males, 0	No	%		Mpumalanga, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	245	17,7	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	131	18,5	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	100	15,6
2	Intestinal infectious diseases (A00_A09)	132	9,5	2	Intestinal infectious diseases (A00_A09)	66	9,3	2	Intestinal infectious diseases (A00_A09)	65	10,2
3	Influenza and pneumonia (J09_J18)	105	7,6	3	Other disorders originating in the perinatal period (P90_P96)	53	7,5	3	Influenza and pneumonia (J09_J18)	57	8,9
4	Other disorders originating in the perinatal period (P90_P96)	94	6,8	4	Influenza and pneumonia (J09_J18)	47	6,6	4	Disorders related to length of gestation and fetal growth (P05_P08)	44	6,9
5	Disorders related to length of gestation and fetal growth (P05_P08)	84	6,1	5	Disorders related to length of gestation and fetal growth (P05_P08)	39	5,5	5	Other disorders originating in the perinatal period (P90_P96)	35	5,5
6	Infections specific to the perinatal period (P35_P39)	60	4,3	6	Infections specific to the perinatal period (P35_P39)	34	4,8	6	Infections specific to the perinatal period (P35_P39)	25	3,9
7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	44	3,2	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	19	2,7	7	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	22	3,4
8	Other bacterial diseases (A30_A49)	33	2,4	8	Other bacterial diseases (A30_A49)	19	2,7	8	Other acute lower respiratory infections (J20_J22)	14	2,2
9	Haemorrhagic and haematological disorders of fetus and newborn (P50_P61)	31	2,2	9	Haemorrhagic and haematological disorders of fetus and newborn (P50_P61)	17	2,4	9	Other bacterial diseases (A30_A49)	13	2,0
10	Other acute lower respiratory infections (J20_J22)	30	2,2	10	Malnutrition (E40_E46)	15	2,1	10	Congenital malformations of the circulatory system (Q20_Q28)	12	1,9
	Other Natural	468	33,8		Other Natural	234	33,0		Other Natural	228	35,7
	Non-natural	59	4,3		Non-natural	35	4,9		Non-natural	24	3,8
	All causes	1 385	100,0		All causes	709	100,0		All causes	639	100,0

Appendix M8: The ten leading underlying natural causes of death by age and sex: Mpumalanga, 2020 (continued)

	Mpumalanga,1-14	No	%		Mpumalanga,Males, 1-14	No	%		Mpumalanga, Females, 1-14	No	%
1	Intestinal infectious diseases (A00_A09)	79	9,6	1	Intestinal infectious diseases (A00_A09)	46	10,5	1	Intestinal infectious diseases (A00_A09)	33	8,7
2	Influenza and pneumonia (J09_J18)	49	6,0	2	Influenza and pneumonia (J09_J18)	24	5,5	2	Influenza and pneumonia (J09_J18)	24	6,3
3	Malnutrition (E40_E46)	19	2,3	3	Episodic and paroxysmal disorders (G40_G47)	10	2,3	3	Malnutrition (E40_E46)	12	3,2
4	Human immunodeficiency virus [HIV] disease (B20_B24)	18	2,2	4	Other acute lower respiratory infections (J20_J22)	10	2,3	4	Human immunodeficiency virus [HIV] disease (B20_B24)	10	2,6
5	Episodic and paroxysmal disorders (G40_G47)	17	2,1	5	Metabolic disorders (E70_E90)	9	2,0	5	Other bacterial diseases (A30_A49)	8	2,1
6	Metabolic disorders (E70_E90)	16	1,9	6	Cerebral palsy and other paralytic syndromes (G80_G83)	9	2,0	6	Inflammatory diseases of the central nervous system (G00_G09)	8	2,1
7	Cerebral palsy and other paralytic syndromes (G80_G83)	16	1,9	7	Human immunodeficiency virus [HIV] disease (B20_B24)	8	1,8	7	Metabolic disorders (E70_E90)	7	1,8
8	Other bacterial diseases (A30_A49)	15	1,8	8	Other bacterial diseases (A30_A49)	7	1,6	8	Aplastic and other anaemias (D60_D64)	7	1,8
9	Other acute lower respiratory infections (J20_J22)	15	1,8	9	Malnutrition (E40_E46)	7	1,6	9	Tuberculosis (A15_A19)	7	1,8
10	Tuberculosis (A15_A19)	13	1,6	10	Tuberculosis (A15_A19)	6	1,4	10	Episodic and paroxysmal disorders (G40_G47)	7	1,8
	Other Natural	340	41,4		Other Natural	168	38,2		Other Natural	168	44,2
	Non-natural	225	27,4		Non-natural	136	30,9		Non-natural	89	23,4
	All causes	822	100,0		All causes	440	100,0		All causes	380	100,0
	Mpumalanga,15-44	No	%		Mpumalanga,Males, 15-44	No	%		Mpumalanga, Females, 15-44	No	%
1	Human immunodeficiency virus [HIV] disease (B20_B24)	679	8,6	1	Human immunodeficiency virus [HIV] disease (B20_B24)	345	7,5	1	Human immunodeficiency virus [HIV] disease (B20_B24)	334	10,2
2	Tuberculosis (A15_A19)	587	7,5	2	Tuberculosis (A15_A19)	329	7,2	2	Other viral diseases (B25_B34)	307	9,4
3	Other viral diseases (B25_B34)	569	7,2	3	Other viral diseases (B25_B34)	260	5,7	3	Tuberculosis (A15_A19)	257	7,9
4	Influenza and pneumonia (J09_J18)	379	4,8	4	Influenza and pneumonia (J09_J18)	200	4,4	4	Influenza and pneumonia (J09_J18)	178	5,4
5	Cerebrovascular diseases (I60_I69)	146	1,9	5	Cerebrovascular diseases (I60_I69)	79	1,7	5	Malignant neoplasms of female genital organs (C51_C58)	107	3,3
6	Other acute lower respiratory infections (J20_J22)	142	1,8	6	Intestinal infectious diseases (A00_A09)	73	1,6	6	Other acute lower respiratory infections (J20_J22)	75	2,3
7	Intestinal infectious diseases (A00_A09)	132	1,7	7	Diabetes mellitus (E10_E14)	69	1,5	7	Certain disorders involving the immune mechanism (D80_D89)	74	2,3
8	Ischaemic heart diseases (I20_I25)	130	1,7	8	Other acute lower respiratory infections (J20_J22)	67	1,5	8	Ischaemic heart diseases (I20_I25)	71	2,2
9	Certain disorders involving the immune mechanism (D80_D89)	127	1,6	9	Covid_19 (U071_U072)	62	1,4	9	Cerebrovascular diseases (I60_I69)	67	2,1
10	Other forms of heart disease (I30_I52)	126	1,6	10	Episodic and paroxysmal disorders (G40_G47)	61	1,3	10	Other forms of heart disease (I30_I52)	66	2,0
	Other Natural	2 976	37,8		Non-natural	1 547	33,8		Other Natural	1 416	43,3
	Non-natural	1 875	23,8		Other Natural	1 481	32,4		Non-natural	315	9,6
	All causes	7 868	100,0		All causes	4 573	100,0		All causes	3 267	100,0

Appendix M8: The ten leading underlying natural causes of death by age and sex: Mpumalanga, 2020 (continued)

	Mpumalanga,45-64	No	%		Mpumalanga,Males, 45-64	No	%		Mpumalanga, Females, 45-64	No	%
1	Diabetes mellitus (E10_E14)	674	7,9	1	Tuberculosis (A15_A19)	329	7,0	1	Diabetes mellitus (E10_E14)	364	9,8
2	Tuberculosis (A15_A19)	472	5,6	2	Diabetes mellitus (E10_E14)	308	6,5	2	Cerebrovascular diseases (I60_I69)	212	5,7
3	Cerebrovascular diseases (I60_I69)	458	5,4	3	Influenza and pneumonia (J09_J18)	253	5,4	3	Hypertensive diseases (I10_I15)	210	5,6
4	Influenza and pneumonia (J09_J18)	434	5,1	4	Cerebrovascular diseases (I60_I69)	245	5,2	4	Other viral diseases (B25_B34)	187	5,0
5	Human immunodeficiency virus [HIV] disease (B20_B24)	405	4,8	5	Human immunodeficiency virus [HIV] disease (B20_B24)	222	4,7	5	Human immunodeficiency virus [HIV] disease (B20_B24)	183	4,9
6	Other viral diseases (B25_B34)	385	4,5	6	Other viral diseases (B25_B34)	198	4,2	6	Influenza and pneumonia (J09_J18)	181	4,9
7	Hypertensive diseases (I10_I15)	385	4,5	7	Ischaemic heart diseases (I20_I25)	181	3,8	7	Malignant neoplasms of female genital organs (C51_C58)	175	4,7
8	Covid_19 (U071_U072)	328	3,9	8	Covid_19 (U071_U072)	181	3,8	8	Covid_19 (U071_U072)	147	3,9
9	Ischaemic heart diseases (I20_I25)	297	3,5	9	Hypertensive diseases (I10_I15)	173	3,7	9	Tuberculosis (A15_A19)	141	3,8
10	Other forms of heart disease (I30_I52)	267	3,1	10	Other forms of heart disease (I30_I52)	139	2,9	10	Other forms of heart disease (I30_I52)	128	3,4
	Other Natural	3 864	45,6		Other Natural	2 110	44,6		Other Natural	1 686	45,2
	Non-natural	509	6,0		Non-natural	388	8,2		Non-natural	117	3,1
	All causes	8 478	100,0		All causes	4 727	100,0		All causes	3 731	100,0
	Mpumalanga,65+	No	%		Mpumalanga,Males, 65+	No	%		Mpumalanga, Females, 65+	No	%
1	Diabetes mellitus (E10_E14)	1 165	10,3	1	Cerebrovascular diseases (I60_I69)	454	9,2	1	Diabetes mellitus (E10_E14)	741	11,6
2	Cerebrovascular diseases (I60_I69)	1 161	10,3	2	Diabetes mellitus (E10_E14)	423	8,6	2	Cerebrovascular diseases (I60_I69)	705	11,0
3	Hypertensive diseases (I10_I15)	1 025	9,1	3	Hypertensive diseases (I10_I15)	356	7,3	3	Hypertensive diseases (I10_I15)	669	10,5
4	Ischaemic heart diseases (I20_I25)	648	5,7	4	Influenza and pneumonia (J09_J18)	297	6,1	4	Ischaemic heart diseases (I20_I25)	367	5,7
5	Influenza and pneumonia (J09_J18)	629	5,6	5	Ischaemic heart diseases (I20_I25)	280	5,7	5	Other forms of heart disease (I30_I52)	335	5,2
6	Other forms of heart disease (I30_I52)	603	5,3	6	Other forms of heart disease (I30_I52)	267	5,4	6	Influenza and pneumonia (J09_J18)	332	5,2
7	Covid_19 (U071_U072)	304	2,7	7	Malignant neoplasms of male genital organs (C60_C63)	178	3,6	7	Renal failure (N17_N19)	143	2,2
8	Renal failure (N17_N19)	269	2,4	8	Covid_19 (U071_U072)	162	3,3	8	Covid_19 (U071_U072)	142	2,2
9	Chronic lower respiratory diseases (J40_J47)	235	2,1	9	Tuberculosis (A15_A19)	158	3,2	9	Intestinal infectious diseases (A00_A09)	119	1,9
10	Tuberculosis (A15_A19)	225	2,0	10	Chronic lower respiratory diseases (J40_J47)	139	2,8	10	Malignant neoplasms of female genital organs (C51_C58)	117	1,8
	Other Natural	4 820	42,6		Other Natural	2 056	41,9		Other Natural	2 632	41,2
	Non-natural	228	2,0		Non-natural	139	2,8		Non-natural	89	1,4
	All causes	11 312	100,0		All causes	4 909	100,0		All causes	6 391	100,0

Appendix M9: The ten leading underlying natural causes of death by age and sex: Limpopo, 2020

	Limpopo, all ages	No	%		Limpopo, Males, all ages	No	%		Limpopo, Females, all ages	No	%
1	Diabetes mellitus (E10_E14)	3 220	7,2	1	Influenza and pneumonia (J09_J18)	1 447	6,7	1	Diabetes mellitus (E10_E14)	1 883	8,3
2	Cerebrovascular diseases (I60_I69)	2 909	6,5	2	Diabetes mellitus (E10_E14)	1 335	6,2	2	Cerebrovascular diseases (I60_I69)	1 740	7,7
3	Influenza and pneumonia (J09_J18)	2 809	6,3	3	Cerebrovascular diseases (I60_I69)	1 167	5,4	3	Hypertensive diseases (I10_I15)	1 538	6,8
4	Hypertensive diseases (I10_I15)	2 550	5,7	4	Tuberculosis (A15_A19)	1 111	5,1	4	Influenza and pneumonia (J09_J18)	1 355	6,0
5	Tuberculosis (A15_A19)	1 812	4,1	5	Hypertensive diseases (I10_I15)	1 011	4,7	5	Human immunodeficiency virus [HIV] disease (B20_B24)	888	3,9
6	Human immunodeficiency virus [HIV] disease (B20_B24)	1 701	3,8	6	Human immunodeficiency virus [HIV] disease (B20_B24)	812	3,8	6	Other viral diseases (B25_B34)	863	3,8
7	Other viral diseases (B25_B34)	1 603	3,6	7	Other viral diseases (B25_B34)	735	3,4	7	Tuberculosis (A15_A19)	695	3,1
8	Other forms of heart disease (I30_I52)	1 247	2,8	8	Other forms of heart disease (I30_I52)	554	2,6	8	Other forms of heart disease (I30_I52)	692	3,1
9	Renal failure (N17_N19)	999	2,2	9	Renal failure (N17_N19)	516	2,4	9	Malignant neoplasms of female genital organs (C51_C58)	507	2,2
10	Intestinal infectious diseases (A00_A09)	894	2,0	10	Intestinal infectious diseases (A00_A09)	435	2,0	10	Renal failure (N17_N19)	482	2,1
	Other Natural	21 200	47,7		Other Natural	9 981	46,1		Other Natural	11 106	49,0
	Non-natural	3 471	7,8		Non-natural	2 533	11,7		Non-natural	911	4,0
	All causes	44 415	100,0		All causes	21 637	100,0		All causes	22 660	100,0
	Limpopo, 0	No	%		Limpopo, Males, 0	No	%		Limpopo, Females, 0	No	%
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	391	15,3	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	207	15,3	1	Respiratory and cardiovascular disorders specific to the perinatal period (P20_P29)	179	15,3
2	Other disorders originating in the perinatal period (P90_P96)	215	8,4	2	Other disorders originating in the perinatal period (P90_P96)	133	9,8	2	Disorders related to length of gestation and fetal growth (P05_P08)	84	7,2
3	Disorders related to length of gestation and fetal growth (P05_P08)	180	7,0	3	Intestinal infectious diseases (A00_A09)	96	7,1	3	Influenza and pneumonia (J09_J18)	83	7,1
4	Influenza and pneumonia (J09_J18)	177	6,9	4	Disorders related to length of gestation and fetal growth (P05_P08)	94	6,9	4	Intestinal infectious diseases (A00_A09)	77	6,6
5	Intestinal infectious diseases (A00_A09)	174	6,8	5	Influenza and pneumonia (J09_J18)	91	6,7	5	Other disorders originating in the perinatal period (P90_P96)	75	6,4
6	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	129	5,0	6	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	67	4,9	6	Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00_P04)	58	5,0
7	Infections specific to the perinatal period (P35_P39)	114	4,5	7	Infections specific to the perinatal period (P35_P39)	59	4,4	7	Infections specific to the perinatal period (P35_P39)	50	4,3
8	Other congenital malformations (Q80_Q89)	54	2,1	8	Digestive system disorders of fetus and newborn (P75_P78)	30	2,2	8	Other congenital malformations (Q80_Q89)	26	2,2
9	Other bacterial diseases (A30_A49)	48	1,9	9	Other congenital malformations (Q80_Q89)	27	2,0	9	Inflammatory diseases of the central nervous system (G00_G09)	23	2,0
10	Digestive system disorders of fetus and newborn (P75_P78)	44	1,7	10	Other bacterial diseases (A30_A49)	27	2,0	10	Other bacterial diseases (A30_A49)	20	1,7
	Other Natural	937	36,6		Other Natural	472	34,9		Other Natural	449	38,4
	Non-natural	96	3,8		Non-natural	51	3,8		Non-natural	45	3,8
	All causes	2 559	100,0		All causes	1 354	100,0		All causes	1 169	100,0

Appendix M9: The ten leading underlying natural causes of death by age and sex: Limpopo, 2020 (continued)

	Limpopo, 1-14	No	%		Limpopo, Males, 1-14	No	%		Limpopo, Females, 1-14	No	%
1	Influenza and pneumonia (J09_J18)	105	7,7	1	Influenza and pneumonia (J09_J18)	58	7,9	1	Intestinal infectious diseases (A00_A09)	47	7,5
2	Intestinal infectious diseases (A00_A09)	102	7,4	2	Intestinal infectious diseases (A00_A09)	53	7,2	2	Influenza and pneumonia (J09_J18)	46	7,3
3	Tuberculosis (A15_A19)	32	2,3	3	Other bacterial diseases (A30_A49)	18	2,4	3	Tuberculosis (A15_A19)	20	3,2
4	Other bacterial diseases (A30_A49)	31	2,3	4	Cerebral palsy and other paralytic syndromes (G80_G83)	15	2,0	4	Human immunodeficiency virus [HIV] disease (B20_B24)	16	2,5
5	Human immunodeficiency virus [HIV] disease (B20_B24)	31	2,3	5	Inflammatory diseases of the central nervous system (G00_G09)	15	2,0	5	Other bacterial diseases (A30_A49)	12	1,9
6	Inflammatory diseases of the central nervous system (G00_G09)	25	1,8	6	Human immunodeficiency virus [HIV] disease (B20_B24)	15	2,0	6	Other viral diseases (B25_B34)	12	1,9
7	Malnutrition (E40_E46)	25	1,8	7	Malnutrition (E40_E46)	14	1,9	7	Other forms of heart disease (I30_I52)	12	1,9
8	Cerebral palsy and other paralytic syndromes (G80_G83)	23	1,7	8	Other diseases of the respiratory system (J95_J99)	13	1,8	8	Malnutrition (E40_E46)	11	1,7
9	Other forms of heart disease (I30_I52)	23	1,7	9	Tuberculosis (A15_A19)	12	1,6	9	Inflammatory diseases of the central nervous system (G00_G09)	10	1,6
10	Other diseases of the respiratory system (J95_J99)	22	1,6	10	Other forms of heart disease (I30_I52)	11	1,5	10	Other diseases of the respiratory system (J95_J99)	9	1,4
	Other Natural	630	45,9		Other Natural	312	42,4		Other Natural	313	49,7
	Non-natural	323	23,5		Non-natural	200	27,2		Non-natural	122	19,4
	All causes	1 372	100,0		All causes	736	100,0		All causes	630	100,0
	Limpopo, 15-44	No	%		Limpopo, Males, 15-44	No	%		Limpopo, Females, 15-44	No	%
1	Human immunodeficiency virus [HIV] disease (B20_B24)	859	8,9	1	Tuberculosis (A15_A19)	423	8,3	1	Human immunodeficiency virus [HIV] disease (B20_B24)	515	11,3
2	Other viral diseases (B25_B34)	795	8,2	2	Human immunodeficiency virus [HIV] disease (B20_B24)	343	6,8	2	Other viral diseases (B25_B34)	464	10,2
3	Tuberculosis (A15_A19)	778	8,0	3	Other viral diseases (B25_B34)	328	6,5	3	Influenza and pneumonia (J09_J18)	353	7,7
4	Influenza and pneumonia (J09_J18)	647	6,7	4	Influenza and pneumonia (J09_J18)	292	5,7	4	Tuberculosis (A15_A19)	352	7,7
5	Diabetes mellitus (E10_E14)	210	2,2	5	Diabetes mellitus (E10_E14)	104	2,0	5	Malignant neoplasms of female genital organs (C51_C58)	126	2,8
6	Renal failure (N17_N19)	188	1,9	6	Renal failure (N17_N19)	102	2,0	6	Certain disorders involving the immune mechanism (D80_D89)	121	2,6
7	Certain disorders involving the immune mechanism (D80_D89)	186	1,9	7	Cerebrovascular diseases (I60_I69)	81	1,6	7	Diabetes mellitus (E10_E14)	106	2,3
8	Intestinal infectious diseases (A00_A09)	165	1,7	8	Intestinal infectious diseases (A00_A09)	75	1,5	8	Intestinal infectious diseases (A00_A09)	89	1,9
9	Cerebrovascular diseases (I60_I69)	162	1,7	9	Episodic and paroxysmal disorders (G40_G47)	75	1,5	9	Renal failure (N17_N19)	86	1,9
10	Other forms of heart disease (I30_I52)	159	1,6	10	Other forms of heart disease (I30_I52)	73	1,4	10	Other forms of heart disease (I30_I52)	85	1,9
	Other Natural	3 603	37,2		Other Natural	1 630	32,1		Other Natural	1 904	41,7
	Non-natural	1 939	20,0		Non-natural	1 553	30,6		Non-natural	367	8,0
	All causes	9 691	100,0		All causes	5 079	100,0		All causes	4 568	100,0

Appendix M9: The ten leading underlying natural causes of death by age and sex: Limpopo, 2020 (continued)

	Limpopo, 45-64	No	%		Limpopo, Males, 45-64	No	%		Limpopo, Females, 45-64	No	%
1	Diabetes mellitus (E10_E14)	1 068	9,2	1	Diabetes mellitus (E10_E14)	488	7,6	1	Diabetes mellitus (E10_E14)	580	11,4
2	Tuberculosis (A15_A19)	732	6,3	2	Tuberculosis (A15_A19)	486	7,5	2	Hypertensive diseases (I10_I15)	326	6,4
3	Influenza and pneumonia (J09_J18)	723	6,3	3	Influenza and pneumonia (J09_J18)	439	6,8	3	Other viral diseases (B25_B34)	294	5,8
4	Human immunodeficiency virus [HIV] disease (B20_B24)	648	5,6	4	Human immunodeficiency virus [HIV] disease (B20_B24)	374	5,8	4	Influenza and pneumonia (J09_J18)	283	5,6
5	Other viral diseases (B25_B34)	610	5,3	5	Cerebrovascular diseases (I60_I69)	321	5,0	5	Human immunodeficiency virus [HIV] disease (B20_B24)	274	5,4
6	Hypertensive diseases (I10_I15)	607	5,3	6	Other viral diseases (B25_B34)	315	4,9	6	Cerebrovascular diseases (I60_I69)	259	5,1
7	Cerebrovascular diseases (I60_I69)	580	5,0	7	Hypertensive diseases (I10_I15)	281	4,4	7	Tuberculosis (A15_A19)	243	4,8
8	Covid_19 (U071_U072)	331	2,9	8	Covid_19 (U071_U072)	192	3,0	8	Malignant neoplasms of female genital organs (C51_C58)	210	4,1
9	Other forms of heart disease (I30_I52)	308	2,7	9	Renal failure (N17_N19)	174	2,7	9	Other forms of heart disease (I30_I52)	152	3,0
10	Renal failure (N17_N19)	302	2,6	10	Other forms of heart disease (I30_I52)	156	2,4	10	Covid_19 (U071_U072)	138	2,7
	Other Natural	4 935	42,7		Other Natural	2 697	41,8		Other Natural	2 150	42,3
	Non-natural	717	6,2		Non-natural	534	8,3		Non-natural	178	3,5
	All causes	11 561	100,0		All causes	6 457	100,0		All causes	5 087	100,0
	Limpopo, 65+	No	%		Limpopo, Males, 65+	No	%		Limpopo, Females, 65+	No	%
1	Cerebrovascular diseases (I60_I69)	2 162	11,2	1	Cerebrovascular diseases (I60_I69)	761	9,5	1	Cerebrovascular diseases (I60_I69)	1 400	12,5
2	Diabetes mellitus (E10_E14)	1 932	10,0	2	Diabetes mellitus (E10_E14)	741	9,2	2	Diabetes mellitus (E10_E14)	1 189	10,6
3	Hypertensive diseases (I10_I15)	1 822	9,5	3	Hypertensive diseases (I10_I15)	678	8,5	3	Hypertensive diseases (I10_I15)	1 144	10,2
4	Influenza and pneumonia (J09_J18)	1 157	6,0	4	Influenza and pneumonia (J09_J18)	567	7,1	4	Influenza and pneumonia (J09_J18)	590	5,3
5	Other forms of heart disease (I30_I52)	739	3,8	5	Other forms of heart disease (I30_I52)	306	3,8	5	Other forms of heart disease (I30_I52)	433	3,9
6	Renal failure (N17_N19)	496	2,6	6	Malignant neoplasms of male genital organs (C60_C63)	264	3,3	6	Renal failure (N17_N19)	261	2,3
7	Ischaemic heart diseases (I20_I25)	337	1,8	7	Renal failure (N17_N19)	234	2,9	7	Malignant neoplasms of female genital organs (C51_C58)	171	1,5
8	Covid_19 (U071_U072)	312	1,6	8	Chronic lower respiratory diseases (J40_J47)	232	2,9	8	Intestinal infectious diseases (A00_A09)	162	1,4
9	Chronic lower respiratory diseases (J40_J47)	309	1,6	9	Tuberculosis (A15_A19)	183	2,3	9	Ischaemic heart diseases (I20_I25)	162	1,4
10	Intestinal infectious diseases (A00_A09)	272	1,4	10	Ischaemic heart diseases (I20_I25)	174	2,2	10	Covid_19 (U071_U072)	149	1,3
	Other Natural	9 298	48,3		Other Natural	3 676	45,9		Other Natural	5 346	47,7
	Non-natural	396	2,1		Non-natural	195	2,4		Non-natural	199	1,8
	All causes	19 232	100,0		All causes	8 011	100,0		All causes	11 206	100,0

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), 2020

Death province	District	COVID-19 (U071-U072)	Certain infectious and parasitic diseases (A00-B99)	Neoplasms (C00-D48)	Diseases of the blood and immune mechanism (D50-D89)	Endocrine, nutritional and metabolic diseases (E00-E90)	Diseases of the nervous system (G00-G99)	Diseases of the circulatory system (I00-I99)	Diseases of the respiratory system (J00-J99)	Certain conditions originating in the perinatal period (P00-P96)	Other natural causes	External causes of morbidity and mortality (V01_Y98)	Total
Western Cape	Cape Winelands	563	719	832	19	485	118	1 245	398	89	650	550	5 668
	Central Karoo	8	23	24	2	10	1	47	25	3	21	20	184
	City of Cape Town	3 907	3 547	4 824	135	2 985	592	6 823	2 108	493	3 657	3 540	32 611
	Garden Route	203	257	282	20	149	45	461	183	14	202	118	1 934
	Overberg	149	227	338	3	175	57	476	145	21	254	183	2 028
	West Coast	350	479	542	30	352	59	925	351	53	679	238	4 058
	Unspecified	1 029	1 137	1 336	51	721	158	1 826	609	88	988	1 218	9 161
	Total	6 209	6 389	8 178	260	4 877	1 030	11 803	3 819	761	6 451	5 867	55 644
Eastern Cape	Alfred Nzo	254	847	218	51	381	95	754	665	26	2 627	776	6 694
	Amathole	647	1 124	457	153	761	192	1 711	1 102	50	1 027	640	7 864
	Buffalo City	1 099	1 391	989	114	942	199	1 985	797	77	916	711	9 220
	Chris Hani	1 086	1 379	544	71	839	162	1 725	1 033	84	2 665	704	10 292
	Joe Gqabi	174	515	142	49	177	48	562	370	43	1 069	260	3 409
	Nelson Mandela Bay	2 128	2 609	1 520	117	1 818	355	3 233	1 323	142	1 455	1 267	15 967
	O.R.Tambo	744	1 673	502	110	705	219	1 344	1 177	43	5 038	1 601	13 156
	Sarah Baartman	707	676	456	137	416	96	1 059	436	44	687	302	5 016
	Unspecified	485	713	330	59	466	72	885	565	58	1 994	796	6 423
	Total	7 324	10 927	5 158	861	6 505	1 438	13 258	7 468	567	17 478	7 057	78 041
Northern Cape	Frances Baard	339	1 018	490	105	403	110	1 035	432	96	897	396	5 321
	John Taolo Gaetsewe	105	416	106	61	147	39	362	195	122	886	225	2 664
	Namakwa	50	192	191	26	106	26	325	220	31	225	129	1 521
	Pixley ka Seme	135	374	205	68	141	33	474	261	38	360	134	2 223
	Z F Mgcawu	117	366	237	105	194	63	540	353	49	473	269	2 766
	Unspecified	26	68	39	7	37	9	96	28	27	84	46	467
	Total	772	2 434	1 268	372	1 028	280	2 832	1 489	363	2 925	1 199	14 962

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), 2020

Death province	District	COVID-19 (U071-U072)	Certain infectious and parasitic diseases (A00-B99)	Neoplasms (C00-D48)	Diseases of the blood and immune mechanism (D50-D89)	Endocrine, nutritional and metabolic diseases (E00-E90)	Diseases of the nervous system (G00-G99)	Diseases of the circulatory system (I00-I99)	Diseases of the respiratory system (J00-J99)	Certain conditions originating in the perinatal period (P00-P96)	Other natural causes	External causes of morbidity and mortality (V01_Y98)	Total
Free State	Fezile Dabi	338	819	370	112	450	85	1 257	501	100	716	319	5 067
	Lejweleputswa	540	967	394	255	533	107	1 278	786	197	1 355	517	6 929
	Mangaung	761	1 187	719	151	567	122	1 492	686	162	2 220	753	8 820
	Thabo Mofutsanyane	382	1 456	490	163	806	164	1 764	907	194	1 128	783	8 237
	Xhariep	23	144	81	19	76	15	214	87	7	151	59	876
	Unspecified	123	260	118	45	153	31	332	164	45	397	204	1 872
	Total	2 167	4 833	2 172	745	2 585	524	6 337	3 131	705	5 967	2 635	31 801
Kwa-Zulu Natal	Amajuba	77	238	109	16	176	41	296	188	20	302	113	1 576
	Harry Gwala	354	657	264	62	380	86	775	388	55	946	525	4 492
	King Cetshwayo	293	862	412	74	431	79	912	413	190	1 243	868	5 777
	Ugu	542	1 199	503	42	663	118	1 284	615	102	1 532	721	7 321
	Umgungundlovu	703	1 380	1 010	92	1 286	210	2 111	883	140	1 717	1 289	10 821
	Umkhanyakude	118	686	268	41	219	55	545	148	86	406	210	2 782
	Umzinyathi	51	494	161	39	253	55	511	312	65	1 047	441	3 429
	Uthukela	201	1 142	323	81	534	109	1 621	389	121	672	740	5 933
	Zululand	78	745	210	42	408	75	742	324	77	1 098	382	4 181
	eThekwini	2 732	3 262	2 242	212	2 080	411	4 616	1 853	472	8 592	2 921	29 393
	iLembe	145	421	162	16	288	39	544	186	21	275	132	2 229
	Unspecified	813	2 181	964	155	1 210	224	2 440	1 308	295	4 783	2 275	16 648
	Total	6 107	13 267	6 628	872	7 928	1 502	16 397	7 007	1 644	22 613	10 617	94 582
North West	Bojanala	138	864	341	106	480	93	966	580	99	1 048	475	5 190
	Dr Kenneth Kaunda	507	1 457	816	143	468	145	1 445	659	161	1 325	619	7 745
	Dr Ruth Segomotsi Mopati	73	849	226	67	268	74	886	366	149	968	281	4 207
	Ngaka Modiri Molema	78	769	241	104	334	97	892	471	157	2 279	473	5 895
	Unspecified	223	991	473	174	592	146	1 247	766	354	1 831	711	7 508
	Total	1 019	4 930	2 097	594	2 142	555	5 436	2 842	920	7 451	2 559	30 545

Appendix N2: Number of deaths by main groups of causes of death and district municipality of death occurrence (Gauteng, Mpumalanga and Limpopo), 2020

Death province	District	COVID-19 (U071-U072)	Certain infectious and parasitic diseases (A00-B99)	Neoplasms (C00-D48)	Diseases of the blood and immune mechanism (D50-D89)	Endocrine, nutritional and metabolic diseases (E00-E90)	Diseases of the nervous system (G00-G99)	Diseases of the circulatory system (I00-I99)	Diseases of the respiratory system (J00-J99)	Certain conditions originating in the perinatal period (P00-P96)	Other natural causes	External causes of morbidity and mortality (V01_Y98)	Total
Gauteng	City of Johannesburg	2 606	3 336	3 283	364	1 481	569	4 744	2 478	996	10 129	3 505	33 491
	City of Tshwane	1 683	3 029	3 173	367	2 289	558	5 922	2 787	726	5 116	2 063	27 713
	Ekurhuleni	1 260	1 985	1 589	264	1 186	312	3 121	2 105	638	4 688	1 689	18 837
	Sedibeng	744	1 229	937	169	936	219	2 415	1 233	183	2 377	977	11 419
	West Rand	348	538	344	148	249	57	684	364	97	1 327	527	4 683
	Unspecified	934	1 532	969	206	764	218	1 766	1 135	289	3 014	1 961	12 788
	Total	7 575	11 649	10 295	1 518	6 905	1 933	18 652	10 102	2 929	26 651	10 722	108 931
Mpumalanga	Ehlanzeni	231	1 857	841	112	880	190	1 935	821	161	2 398	828	10 254
	Gert Sibande	224	1 348	466	172	616	121	1 321	628	205	1 454	755	7 310
	Nkangala	184	835	367	165	486	78	1 233	1 030	102	1 939	530	6 949
	Unspecified	110	886	288	73	440	111	1 093	501	114	953	783	5 352
	Total	749	4 926	1 962	522	2 422	500	5 582	2 980	582	6 744	2 896	29 865
Limpopo	Capricorn	147	1 350	509	80	704	143	1 226	852	240	2 036	541	7 828
	Mopani	101	1 042	419	122	694	98	1 183	692	336	3 107	577	8 371
	Sekhukhune	111	1 142	338	138	651	110	1 965	1 075	108	1 491	542	7 671
	Vhembe	56	709	308	70	496	42	715	284	113	2 642	402	5 837
	Waterberg	117	1 027	298	82	403	85	858	523	103	895	347	4 738
	Unspecified	236	1 525	707	124	843	178	1 598	751	221	2 725	1 062	9 970
	Total	768	6 795	2 579	616	3 791	656	7 545	4 177	1 121	12 896	3 471	44 415

Appendix 0: Proportion of deaths by main groups of causes of death and district municipality of death occurrence (Western Cape, Eastern Cape and Northern Cape), 2020

Appendix O: Proportion of deaths by main groups of death and district municipality of death occurrence (Western Cape, Eastern Cape and Northern Cape), 2020

Death province	District	COVID-19 (U071-U072)	Certain infectious and parasitic diseases (A00-B99)	Neoplasms (C00-D48)	Diseases of the blood and immune mechanism (D50-D89)	Endocrine, nutritional and metabolic diseases (E00-E90)	Diseases of the nervous system (G00-G99)	Diseases of the circulatory system (I00-I99)	Diseases of the respiratory system (J00-J99)	Certain conditions originating in the perinatal period (P00-P96)	Other natural causes	External causes of morbidity and mortality (V01-Y98)	Total
Western Cape	Cape Winelands	9,9	12,7	14,7	0,3	8,6	2,1	22,0	7,0	1,6	11,5	9,7	100,0
	Central Karoo	4,3	12,5	13,0	1,1	5,4	0,5	25,5	13,6	1,6	11,4	10,9	100,0
	City of Cape Town	12,0	10,9	14,8	0,4	9,2	1,8	20,9	6,5	1,5	11,2	10,9	100,0
	Garden Route	10,5	13,3	14,6	1,0	7,7	2,3	23,8	9,5	0,7	10,4	6,1	100,0
	Overberg	7,3	11,2	16,7	0,1	8,6	2,8	23,5	7,1	1,0	12,5	9,0	100,0
	West Coast	8,6	11,8	13,4	0,7	8,7	1,5	22,8	8,6	1,3	16,7	5,9	100,0
	Unspecified	11,2	12,4	14,6	0,6	7,9	1,7	19,9	6,6	1,0	10,8	13,3	100,0
	Total	11,2	11,5	14,7	0,5	8,8	1,9	21,2	6,9	1,4	11,6	10,5	100,0
Eastern Cape	Alfred Nzo	3,8	12,7	3,3	0,8	5,7	1,4	11,3	9,9	0,4	39,2	11,6	100,0
	Amathole	8,2	14,3	5,8	1,9	9,7	2,4	21,8	14,0	0,6	13,1	8,1	100,0
	Buffalo City	11,9	15,1	10,7	1,2	10,2	2,2	21,5	8,6	0,8	9,9	7,7	100,0
	Chris Hani	10,6	13,4	5,3	0,7	8,2	1,6	16,8	10,0	0,8	25,9	6,8	100,0
	Joe Gqabi	5,1	15,1	4,2	1,4	5,2	1,4	16,5	10,9	1,3	31,4	7,6	100,0
	Nelson Mandela Bay	13,3	16,3	9,5	0,7	11,4	2,2	20,2	8,3	0,9	9,1	7,9	100,0
	O.R.Tambo	5,7	12,7	3,8	0,8	5,4	1,7	10,2	8,9	0,3	38,3	12,2	100,0
	Sarah Baartman	14,1	13,5	9,1	2,7	8,3	1,9	21,1	8,7	0,9	13,7	6,0	100,0
	Unspecified	7,6	11,1	5,1	0,9	7,3	1,1	13,8	8,8	0,9	31,0	12,4	100,0
	Total	9,4	14,0	6,6	1,1	8,3	1,8	17,0	9,6	0,7	22,4	9,0	100,0
Northern Cape	Frances Baard	6,4	19,1	9,2	2,0	7,6	2,1	19,5	8,1	1,8	16,9	7,4	100,0
	John Taolo Gaetsewe	3,9	15,6	4,0	2,3	5,5	1,5	13,6	7,3	4,6	33,3	8,4	100,0
	Namakwa	3,3	12,6	12,6	1,7	7,0	1,7	21,4	14,5	2,0	14,8	8,5	100,0
	Pixley ka Seme	6,1	16,8	9,2	3,1	6,3	1,5	21,3	11,7	1,7	16,2	6,0	100,0
	Z F Mgcawu	4,2	13,2	8,6	3,8	7,0	2,3	19,5	12,8	1,8	17,1	9,7	100,0
	Unspecified	5,6	14,6	8,4	1,5	7,9	1,9	20,6	6,0	5,8	18,0	9,9	100,0
	Total	5,2	16,3	8,5	2,5	6,9	1,9	18,9	10,0	2,4	19,5	8,0	100,0

Appendix O1: Proportion of deaths by main groups of death and district municipality of death occurrence (Free State, KZN and North West), 2020

Death province	District	COVID-19 (U071-U072)	Certain infectious and parasitic diseases (A00-B99)	Neoplasms (C00-D48)	Diseases of the blood and immune mechanism (D50-D89)	Endocrine, nutritional and metabolic diseases (E00-E90)	Diseases of the nervous system (G00-G99)	Diseases of the circulatory system (I00-I99)	Diseases of the respiratory system (J00-J99)	Certain conditions originating in the perinatal period (P00-P96)	Other natural causes	External causes of morbidity and mortality (V01-Y98)	Total
Free State	Fezile Dabi	6,7	16,2	7,3	2,2	8,9	1,7	24,8	9,9	2,0	14,1	6,3	100,0
	Lejweleputswa	7,8	14,0	5,7	3,7	7,7	1,5	18,4	11,3	2,8	19,6	7,5	100,0
	Mangaung	8,6	13,5	8,2	1,7	6,4	1,4	16,9	7,8	1,8	25,2	8,5	100,0
	Thabo Mofutsanyane	4,6	17,7	5,9	2,0	9,8	2,0	21,4	11,0	2,4	13,7	9,5	100,0
	Xhariep	2,6	16,4	9,2	2,2	8,7	1,7	24,4	9,9	0,8	17,2	6,7	100,0
	Unspecified	6,6	13,9	6,3	2,4	8,2	1,7	17,7	8,8	2,4	21,2	10,9	100,0
	Total	6,8	15,2	6,8	2,3	8,1	1,6	19,9	9,8	2,2	18,8	8,3	100,0
Kwa-Zulu Natal	Amajuba	4,9	15,1	6,9	1,0	11,2	2,6	18,8	11,9	1,3	19,2	7,2	100,0
	Harry Gwala	7,9	14,6	5,9	1,4	8,5	1,9	17,3	8,6	1,2	21,1	11,7	100,0
	King Cetshwayo	5,1	14,9	7,1	1,3	7,5	1,4	15,8	7,1	3,3	21,5	15,0	100,0
	Ugu	7,4	16,4	6,9	0,6	9,1	1,6	17,5	8,4	1,4	20,9	9,8	100,0
	Umgungundlovu	6,5	12,8	9,3	0,9	11,9	1,9	19,5	8,2	1,3	15,9	11,9	100,0
	Umkhanyakude	4,2	24,7	9,6	1,5	7,9	2,0	19,6	5,3	3,1	14,6	7,5	100,0
	Umzinyathi	1,5	14,4	4,7	1,1	7,4	1,6	14,9	9,1	1,9	30,5	12,9	100,0
	Uthukela	3,4	19,2	5,4	1,4	9,0	1,8	27,3	6,6	2,0	11,3	12,5	100,0
	Zululand	1,9	17,8	5,0	1,0	9,8	1,8	17,7	7,7	1,8	26,3	9,1	100,0
	eThekwini	9,3	11,1	7,6	0,7	7,1	1,4	15,7	6,3	1,6	29,2	9,9	100,0
	iLembe	6,5	18,9	7,3	0,7	12,9	1,7	24,4	8,3	0,9	12,3	5,9	100,0
	Unspecified	4,9	13,1	5,8	0,9	7,3	1,3	14,7	7,9	1,8	28,7	13,7	100,0
	Total	6,5	14,0	7,0	0,9	8,4	1,6	17,3	7,4	1,7	23,9	11,2	100,0
North West	Bojanala	2,7	16,6	6,6	2,0	9,2	1,8	18,6	11,2	1,9	20,2	9,2	100,0
	Dr Kenneth Kaunda	6,5	18,8	10,5	1,8	6,0	1,9	18,7	8,5	2,1	17,1	8,0	100,0
	Dr Ruth Segomotsi Mompoti	1,7	20,2	5,4	1,6	6,4	1,8	21,1	8,7	3,5	23,0	6,7	100,0
	Ngaka Modiri Molema	1,3	13,0	4,1	1,8	5,7	1,6	15,1	8,0	2,7	38,7	8,0	100,0
	Unspecified	3,0	13,2	6,3	2,3	7,9	1,9	16,6	10,2	4,7	24,4	9,5	100,0
	Total	3,3	16,1	6,9	1,9	7,0	1,8	17,8	9,3	3,0	24,4	8,4	100,0

Appendix O2: Proportion of deaths by main groups of death and district municipality of death occurrence (Gauteng, Mpumalanga and Limpopo), 2020

Death province	District	COVID-19 (U071-U072)	Certain infectious and parasitic diseases (A00-B99)	Neoplasms (C00-D48)	Diseases of the blood and immune mechanism (D50-D89)	Endocrine, nutritional and metabolic diseases (E00-E90)	Diseases of the nervous system (G00-G99)	Diseases of the circulatory system (I00-I99)	Diseases of the respiratory system (J00-J99)	Certain conditions originating in the perinatal period (P00-P96)	Other natural causes	External causes of morbidity and mortality (V01-Y98)	Total
Gauteng	City of Johannesburg	7,8	10,0	9,8	1,1	4,4	1,7	14,2	7,4	3,0	30,2	10,5	100,0
	City of Tshwane	6,1	10,9	11,4	1,3	8,3	2,0	21,4	10,1	2,6	18,5	7,4	100,0
	Ekurhuleni	6,7	10,5	8,4	1,4	6,3	1,7	16,6	11,2	3,4	24,9	9,0	100,0
	Sedibeng	6,5	10,8	8,2	1,5	8,2	1,9	21,1	10,8	1,6	20,8	8,6	100,0
	West Rand	7,4	11,5	7,3	3,2	5,3	1,2	14,6	7,8	2,1	28,3	11,3	100,0
	Unspecified	7,3	12,0	7,6	1,6	6,0	1,7	13,8	8,9	2,3	23,6	15,3	100,0
	Total	7,0	10,7	9,5	1,4	6,3	1,8	17,1	9,3	2,7	24,5	9,8	100,0
Mpumalanga	Ehlanzeni	2,3	18,1	8,2	1,1	8,6	1,9	18,9	8,0	1,6	23,4	8,1	100,0
	Gert Sibande	3,1	18,4	6,4	2,4	8,4	1,7	18,1	8,6	2,8	19,9	10,3	100,0
	Nkangala	2,6	12,0	5,3	2,4	7,0	1,1	17,7	14,8	1,5	27,9	7,6	100,0
	Unspecified	2,1	16,6	5,4	1,4	8,2	2,1	20,4	9,4	2,1	17,8	14,6	100,0
	Total	2,5	16,5	6,6	1,7	8,1	1,7	18,7	10,0	1,9	22,6	9,7	100,0
Limpopo	Capricorn	1,9	17,2	6,5	1,0	9,0	1,8	15,7	10,9	3,1	26,0	6,9	100,0
	Mopani	1,2	12,4	5,0	1,5	8,3	1,2	14,1	8,3	4,0	37,1	6,9	100,0
	Sekhukhune	1,4	14,9	4,4	1,8	8,5	1,4	25,6	14,0	1,4	19,4	7,1	100,0
	Vhembe	1,0	12,1	5,3	1,2	8,5	0,7	12,2	4,9	1,9	45,3	6,9	100,0
	Waterberg	2,5	21,7	6,3	1,7	8,5	1,8	18,1	11,0	2,2	18,9	7,3	100,0
	Unspecified	2,4	15,3	7,1	1,2	8,5	1,8	16,0	7,5	2,2	27,3	10,7	100,0
	Total	1,7	15,3	5,8	1,4	8,5	1,5	17,0	9,4	2,5	29,0	7,8	100,0

Appendix P: The ten leading underlying natural causes of death by district municipality of death occurrence, Western Cape, 2020

Cape Winelands		No	%	Central Karoo		No	%	City of Cape Town		No	%
Covid-19 (U071-U072)	1	563	9,9	Hypertensive diseases (I10-I15)	1	15	8,2	Covid-19 (U071-U072)	1	3 907	12,0
Diabetes mellitus (E10-E14)	2	424	7,5	Cerebrovascular diseases (I60-I69)	2	14	7,6	Diabetes mellitus (E10-E14)	2	2 588	7,9
Cerebrovascular diseases (I60-I69)	3	401	7,1	Chronic lower respiratory diseases (J40-J47)	3	14	7,6	Ischaemic heart diseases (I20-I25)	3	2 305	7,1
Ischaemic heart diseases (I20-I25)	4	389	6,9	Human immunodeficiency virus [HIV] disease	4	11	6,0	Human immunodeficiency virus [HIV] disease	4	1 753	5,4
Human immunodeficiency virus [HIV] disease	5	311	5,5	Ischaemic heart diseases (I20-I25)	5	10	5,4	Cerebrovascular diseases (I60-I69)	5	1 704	5,2
Hypertensive diseases (I10-I15)	6	267	4,7	Tuberculosis (A15-A19)	6	9	4,9	Hypertensive diseases (I10-I15)	6	1 521	4,7
Tuberculosis (A15-A19)	7	230	4,1	Diabetes mellitus (E10-E14)	7	9	4,9	Malignant neoplasms of digestive organs (7	1 243	3,8
Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	8	224	4,0	Covid-19 (U071-U072)	8	8	4,3	Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	8	1 068	3,3
Chronic lower respiratory diseases (J40-J47)	9	204	3,6	Influenza and pneumonia (J09-J18)	9	7	3,8	Tuberculosis (A15-A19)	9	908	2,8
Malignant neoplasms of digestive organs	10	203	3,6	Malignant neoplasms of ill-defined, secondary and unspecified sites (C76-C80)	10	6	3,3	Other forms of heart disease (I30-I52)	10	894	2,7
Other Natural	11	1 902	33,6	Other Natural	11	61	33,2	Other Natural	11	11 180	34,3
Non-natural	12	550	9,7	Non-natural	12	20	10,9	Non-natural	12	3 540	10,9
All causes		5 668	100,0	All causes		184	100,0	All causes		32 611	100,0
Overberg		No	%	West Coast		No	%	Garden Route		No	%
Diabetes mellitus (E10-E14)	1	151	7,4	Covid-19 (U071-U072)	1	350	8,6	Covid-19 (U071-U072)	1	203	10,5
Cerebrovascular diseases (I60-I69)	2	151	7,4	Diabetes mellitus (E10-E14)	2	318	7,8	Hypertensive diseases (I10-I15)	2	124	6,4
Covid-19 (U071-U072)	3	149	7,3	Ischaemic heart diseases (I20-I25)	3	281	6,9	Diabetes mellitus (E10-E14)	3	124	6,4
Ischaemic heart diseases (I20-I25)	4	140	6,9	Cerebrovascular diseases (I60-I69)	4	271	6,7	Ischaemic heart diseases (I20-I25)	4	123	6,4
Hypertensive diseases (I10-I15)	5	106	5,2	Hypertensive diseases (I10-I15)	5	220	5,4	Cerebrovascular diseases (I60-I69)	5	120	6,2
Human immunodeficiency virus [HIV] disease	6	96	4,7	Tuberculosis (A15-A19)	6	194	4,8	Human immunodeficiency virus [HIV] disease	6	93	4,8
Malignant neoplasms of digestive organs	7	91	4,5	Chronic lower respiratory diseases (J40-J47)	7	186	4,6	Tuberculosis (A15-A19)	7	87	4,5
Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	8	78	3,8	Human immunodeficiency virus [HIV] disease (B20-B24)	8	176	4,3	Chronic lower respiratory diseases (J40-J47)	8	80	4,1
Tuberculosis (A15-A19)	9	71	3,5	Malignant neoplasms of digestive organs (C15-C26)	9	144	3,5	Malignant neoplasms of digestive organs (C15-C26)	9	71	3,7
Chronic lower respiratory diseases (J40-J47)	10	70	3,5	Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	10	125	3,1	Influenza and pneumonia (J09-J18)	10	70	3,6
Other Natural	11	742	36,6	Other Natural	11	1 555	38,3	Other Natural	11	721	37,3
Non-natural	12	183	9,0	Non-natural	12	238	5,9	Non-natural	12	118	6,1
All causes		2 028	100,0	All causes		4 058	100,0	All causes		1 934	100,0

Appendix P1: The ten leading underlying natural causes of death by district municipality of death occurrence, Eastern Cape, 2020

Alfred Nzo		No	%	Amathole		No	%	Buffalo City		No	%
Tuberculosis (A15-A19)	1	352	5,3	Hypertensive diseases (I10-I15)	1	772	9,8	Covid-19 (U071-U072)	1	1 099	11,9
Cerebrovascular diseases (I60-I69)	2	343	5,1	Diabetes mellitus (E10-E14)	2	680	8,6	Diabetes mellitus (E10-E14)	2	847	9,2
Diabetes mellitus (E10-E14)	3	327	4,9	Covid-19 (U071-U072)	3	647	8,2	Hypertensive diseases (I10-I15)	3	683	7,4
Influenza and pneumonia (J09-J18)	4	292	4,4	Cerebrovascular diseases (I60-I69)	4	444	5,6	Human immunodeficiency virus [HIV] disease	4	553	6,0
Covid-19 (U071-U072)	5	254	3,8	Influenza and pneumonia (J09-J18)	5	397	5	Tuberculosis (A15-A19)	5	527	5,7
Human immunodeficiency virus [HIV] disease	6	223	3,3	Tuberculosis (A15-A19)	6	396	5	Cerebrovascular diseases (I60-I69)	6	524	5,7
Hypertensive diseases (I10-I15)	7	214	3,2	Chronic lower respiratory diseases (J40-J47)	7	358	4,6	Other forms of heart disease (I30-I52)	7	336	3,6
Chronic lower respiratory diseases (J40-J47)	8	166	2,5	Human immunodeficiency virus [HIV] disease	8	353	4,5	Malignant neoplasms of digestive organs	8	292	3,2
Other viral diseases (B25-B34)	9	145	2,2	Other forms of heart disease (I30-I52)	9	287	3,6	Chronic lower respiratory diseases (J40-J47)	9	276	3,0
Other forms of heart disease (I30-I52)	10	119	1,8	Other viral diseases (B25-B34)	10	175	2,2	Influenza and pneumonia (J09-J18)	10	263	2,9
Other Natural	11	3 483	52,0	Other Natural	11	2 715	34,5	Other Natural	11	3 109	33,7
Non-natural	12	776	11,6	Non-natural	12	640	8,1	Non-natural	12	711	7,7
All causes		6 694	100,0	All causes		7 864	100,0	All causes		9 220	100,0
Chris Hani		No	%	Joe Gqabi		No	%	Nelson Mandela Bay		No	%
Covid-19 (U071-U072)	1	1 086	10,6	Cerebrovascular diseases (I60-I69)	1	238	7,0	Covid-19 (U071-U072)	1	2 128	13,3
Diabetes mellitus (E10-E14)	2	704	6,8	Influenza and pneumonia (J09-J18)	2	179	5,3	Diabetes mellitus (E10-E14)	2	1 639	10,3
Hypertensive diseases (I10-I15)	3	573	5,6	Covid-19 (U071-U072)	3	174	5,1	Hypertensive diseases (I10-I15)	3	1 345	8,4
Cerebrovascular diseases (I60-I69)	4	561	5,5	Human immunodeficiency virus [HIV] disease (B20-B24)	4	151	4,4	Tuberculosis (A15-A19)	4	1 040	6,5
Human immunodeficiency virus [HIV] disease (B20-B24)	5	464	4,5	Tuberculosis (A15-A19)	5	147	4,3	Human immunodeficiency virus [HIV] disease (B20-B24)	5	891	5,6
Tuberculosis (A15-A19)	6	435	4,2	Diabetes mellitus (E10-E14)	6	140	4,1	Cerebrovascular diseases (I60-I69)	6	697	4,4
Influenza and pneumonia (J09-J18)	7	378	3,7	Hypertensive diseases (I10-I15)	7	120	3,5	Ischaemic heart diseases (I20-I25)	7	565	3,5
Chronic lower respiratory diseases (J40-J47)	8	322	3,1	Other viral diseases (B25-B34)	8	114	3,3	Other forms of heart disease (I30-I52)	8	480	3,0
Other forms of heart disease (I30-I52)	9	271	2,6	Other forms of heart disease (I30-I52)	9	103	3,0	Chronic lower respiratory diseases (J40-J47)	9	473	3,0
Other viral diseases (B25-B34)	10	263	2,6	Chronic lower respiratory diseases (J40-J47)	10	65	1,9	Influenza and pneumonia (J09-J18)	10	438	2,7
Other Natural	11	4 531	44,0	Other Natural	11	1 718	50,4	Other Natural	11	5 004	31,3
Non-natural	12	704	6,8	Non-natural	12	260	7,6	Non-natural	12	1 267	7,9
All causes		10 292	100,0	All causes		3 409	100,0	All causes		15 967	100,0

Appendix P1: The ten leading underlying natural causes of death by district municipality of death occurrence, Eastern Cape, 2020 (continued)

O.R. Tambo		No	%	Sarah Baartman		No	%
Covid-19 (U071-U072)	1	744	5,7	Covid-19 (U071-U072)	1	707	14,1
Cerebrovascular diseases (I60-I69)	2	709	5,4	Hypertensive diseases (I10-I15)	2	379	7,6
Tuberculosis (A15-A19)	3	686	5,2	Diabetes mellitus (E10-E14)	3	365	7,3
Diabetes mellitus (E10-E14)	4	577	4,4	Cerebrovascular diseases (I60-I69)	4	323	6,4
Influenza and pneumonia (J09-J18)	5	472	3,6	Tuberculosis (A15-A19)	5	285	5,7
Human immunodeficiency virus [HIV] disease	6	408	3,1	Human immunodeficiency virus [HIV] disease	6	221	4,4
Chronic lower respiratory diseases (J40-J47)	7	379	2,9	Ischaemic heart diseases (I20-I25)	7	185	3,7
Hypertensive diseases (I10-I15)	8	327	2,5	Chronic lower respiratory diseases (J40-J47)	8	179	3,6
Other viral diseases (B25-B34)	9	297	2,3	Influenza and pneumonia (J09-J18)	9	152	3,0
Renal failure (N17-N19)	10	178	1,4	Other forms of heart disease (I30-I52)	10	125	2,5
Other Natural	11	6 778	51,5	Other Natural	11	1 793	35,7
Non-natural	12	1 601	12,2	Non-natural	12	302	6,0
All causes		13 156	100,0	All causes		5 016	100,0

Appendix P2: The ten leading underlying natural causes of death by district municipality of death occurrence, Northern Cape, 2020

Frances Baard				John Taolo Gaetsewe				Namakwa			
		No	%			No	%			No	%
Human immunodeficiency virus [HIV] disease	1	391	7,3	Human immunodeficiency virus [HIV] disease	1	155	5,8	Ischaemic heart diseases (I20-I25)	1	100	6,6
Hypertensive diseases (I10-I15)	2	358	6,7	Hypertensive diseases (I10-I15)	2	146	5,5	Cerebrovascular diseases (I60-I69)	2	94	6,2
Covid-19 (U071-U072)	3	339	6,4	Covid-19 (U071-U072)	3	105	3,9	Diabetes mellitus (E10-E14)	3	90	5,9
Diabetes mellitus (E10-E14)	4	319	6,0	Influenza and pneumonia (J09-J18)	4	104	3,9	Influenza and pneumonia (J09-J18)	4	88	5,8
Cerebrovascular diseases (I60-I69)	5	312	5,9	Diabetes mellitus (E10-E14)	5	97	3,6	Chronic lower respiratory diseases (J40-J47)	5	86	5,7
Tuberculosis (A15-A19)	6	256	4,8	Cerebrovascular diseases (I60-I69)	6	96	3,6	Hypertensive diseases (I10-I15)	6	77	5,1
Other viral diseases (B25-B34)	7	214	4,0	Other viral diseases (B25-B34)	7	95	3,6	Tuberculosis (A15-A19)	7	71	4,7
Influenza and pneumonia (J09-J18)	8	207	3,9	Tuberculosis (A15-A19)	8	92	3,5	Covid-19 (U071-U072)	8	50	3,3
Ischaemic heart diseases (I20-I25)	9	188	3,5	Other forms of heart disease (I30-I52)	9	63	2,4	Malignant neoplasms of digestive organs	9	44	2,9
Other forms of heart disease (I30-I52)	10	116	2,2	Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	10	47	1,8	Human immunodeficiency virus [HIV] disease (B20-B24)	10	43	2,8
Other Natural	11	2 225	41,8	Other Natural	11	1 439	54,0	Other Natural	11	649	42,7
Non-natural	12	396	7,4	Non-natural	12	225	8,4	Non-natural	12	129	8,5
All causes		5 321	100,0	All causes		2 664	100,0	All causes		1 521	100,0
Pixley ka Seme				Z F Mgqawu							
		No	%			No	%				
Cerebrovascular diseases (I60-I69)	1	163	7,3	Hypertensive diseases (I10-I15)	1	178	6,4				
Tuberculosis (A15-A19)	2	142	6,4	Cerebrovascular diseases (I60-I69)	2	164	5,9				
Hypertensive diseases (I10-I15)	3	138	6,2	Diabetes mellitus (E10-E14)	3	146	5,3				
Covid-19 (U071-U072)	4	135	6,1	Tuberculosis (A15-A19)	4	145	5,2				
Human immunodeficiency virus [HIV] disease (B20-B24)	5	132	5,9	Chronic lower respiratory diseases (J40-J47)	5	129	4,7				
Influenza and pneumonia (J09-J18)	6	119	5,4	Human immunodeficiency virus [HIV] disease (B20-B24)	6	119	4,3				
Diabetes mellitus (E10-E14)	7	105	4,7	Covid-19 (U071-U072)	7	117	4,2				
Chronic lower respiratory diseases (J40-J47)	8	92	4,1	Certain disorders involving the immune mechanism (D80-D89)	8	99	3,6				
Ischaemic heart diseases (I20-I25)	9	91	4,1	Influenza and pneumonia (J09-J18)	9	98	3,5				
Certain disorders involving the immune mechanism (D80-D89)	10	54	2,4	Ischaemic heart diseases (I20-I25)	10	85	3,1				
Other Natural	11	918	41,3	Other Natural	11	1 217	44,0				
Non-natural	12	134	6,0	Non-natural	12	269	9,7				
All causes		2 223	100,0	All causes		2 766	100,0				

Appendix P3: The ten leading underlying natural causes of death by district municipality of death occurrence, Free State, 2020

Fezile Dabi		No	%	Lejweleputswa		No	%	Mangaung		No	%
Hypertensive diseases (I10-I15)	1	382	7,5	Covid-19 (U071-U072)	1	540	7,8	Covid-19 (U071-U072)	1	761	8,6
Diabetes mellitus (E10-E14)	2	358	7,1	Influenza and pneumonia (J09-J18)	2	479	6,9	Human immunodeficiency virus [HIV] disease (B20-B24)	2	623	7,1
Other forms of heart disease (I30-I52)	3	342	6,7	Hypertensive diseases (I10-I15)	3	471	6,8	Cerebrovascular diseases (I60-I69)	3	488	5,5
Covid-19 (U071-U072)	4	338	6,7	Diabetes mellitus (E10-E14)	4	400	5,8	Hypertensive diseases (I10-I15)	4	481	5,5
Cerebrovascular diseases (I60-I69)	5	274	5,4	Cerebrovascular diseases (I60-I69)	5	361	5,2	Diabetes mellitus (E10-E14)	5	427	4,8
Influenza and pneumonia (J09-J18)	6	233	4,6	Human immunodeficiency virus [HIV] disease (B20-B24)	6	294	4,2	Influenza and pneumonia (J09-J18)	6	369	4,2
Human immunodeficiency virus [HIV] disease (B20-B24)	7	218	4,3	Tuberculosis (A15-A19)	7	278	4,0	Other forms of heart disease (I30-I52)	7	244	2,8
Tuberculosis (A15-A19)	8	216	4,3	Other forms of heart disease (I30-I52)	8	215	3,1	Tuberculosis (A15-A19)	8	235	2,7
Other viral diseases (B25-B34)	9	190	3,7	Certain disorders involving the immune mechanism (D80-D89)	9	203	2,9	Ischaemic heart diseases (I20-I25)	9	176	2,0
Ischaemic heart diseases (I20-I25)	10	184	3,6	Ischaemic heart diseases (I20-I25)	10	176	2,5	Renal failure (N17-N19)	10	175	2,0
Other Natural	11	2 013	39,7	Other Natural	11	2 995	43,2	Other Natural	11	4 088	46,3
Non-natural	12	319	6,3	Non-natural	12	517	7,5	Non-natural	12	753	8,5
All causes		5 067	100,0	All causes		6 929	100,0	All causes		8 820	100,0
Thabo Mofutsanyane		No	%	Xhariep		No	%				
Hypertensive diseases (I10-I15)	1	640	7,8	Hypertensive diseases (I10-I15)	1	82	9,4				
Diabetes mellitus (E10-E14)	2	619	7,5	Human immunodeficiency virus [HIV] disease	2	63	7,2				
Cerebrovascular diseases (I60-I69)	3	493	6,0	Cerebrovascular diseases (I60-I69)	3	60	6,8				
Influenza and pneumonia (J09-J18)	4	473	5,7	Diabetes mellitus (E10-E14)	4	52	5,9				
Human immunodeficiency virus [HIV] disease	5	439	5,3	Tuberculosis (A15-A19)	5	49	5,6				
Covid-19 (U071-U072)	6	382	4,6	Ischaemic heart diseases (I20-I25)	6	37	4,2				
Other viral diseases (B25-B34)	7	382	4,6	Chronic lower respiratory diseases (J40-J47)	7	35	4,0				
Other forms of heart disease (I30-I52)	8	358	4,3	Influenza and pneumonia (J09-J18)	8	35	4,0				
Tuberculosis (A15-A19)	9	288	3,5	Other forms of heart disease (I30-I52)	9	24	2,7				
Chronic lower respiratory diseases (J40-J47)	10	173	2,1	Covid-19 (U071-U072)	10	23	2,6				
Other Natural	11	3 207	38,9	Other Natural	11	357	40,8				
Non-natural	12	783	9,5	Non-natural	12	59	6,7				
All causes		8 237	100,0	All causes		876	100,0				

Appendix P4: The ten leading underlying natural causes of death by district municipality of death occurrence, KwaZulu-Natal, 2020

Amajuba		No	%	Harry Gwala		No	%	Ugu		No	%
Diabetes mellitus (E10-E14)	1	163	10,3	Covid-19 (U071-U072)	1	354	7,9	Diabetes mellitus (E10-E14)	1	591	8,1
Cerebrovascular diseases (I60-I69)	2	137	8,7	Diabetes mellitus (E10-E14)	2	329	7,3	Covid-19 (U071-U072)	2	542	7,4
Tuberculosis (A15-A19)	3	103	6,5	Cerebrovascular diseases (I60-I69)	3	328	7,3	Cerebrovascular diseases (I60-I69)	3	481	6,6
Influenza and pneumonia (J09-J18)	4	84	5,3	Tuberculosis (A15-A19)	4	248	5,5	Tuberculosis (A15-A19)	4	360	4,9
Hypertensive diseases (I10-I15)	5	79	5,0	Hypertensive diseases (I10-I15)	5	192	4,3	Hypertensive diseases (I10-I15)	5	335	4,6
Covid-19 (U071-U072)	6	77	4,9	Human immunodeficiency virus [HIV] disease (B20-B24)	6	164	3,7	Other viral diseases (B25-B34)	6	304	4,2
Other acute lower respiratory infections	7	70	4,4	Influenza and pneumonia (J09-J18)	7	157	3,5	Influenza and pneumonia (J09-J18)	7	284	3,9
Other viral diseases (B25-B34)	8	58	3,7	Other viral diseases (B25-B34)	8	132	2,9	Human immunodeficiency virus [HIV] disease	8	283	3,9
Other forms of heart disease (I30-I52)	9	45	2,9	Other forms of heart disease (I30-I52)	9	112	2,5	Ischaemic heart diseases (I20-I25)	9	235	3,2
Human immunodeficiency virus [HIV] disease (B20-B24)	10	35	2,2	Chronic lower respiratory diseases (J40-J47)	10	108	2,4	Other forms of heart disease (I30-I52)	10	179	2,4
Other Natural	11	612	38,8	Other Natural	11	1 843	41,0	Other Natural	11	3 006	41,1
Non-natural	12	113	7,2	Non-natural	12	525	11,7	Non-natural	12	721	9,8
All causes		1 576	100,0	All causes		4 492	100,0	All causes		7 321	100,0
Zululand		No	%	eThekweni		No	%	iLembe		No	%
Diabetes mellitus (E10-E14)	1	354	8,5	Covid-19 (U071-U072)	1	2 732	9,3	Diabetes mellitus (E10-E14)	1	237	10,6
Cerebrovascular diseases (I60-I69)	2	278	6,6	Diabetes mellitus (E10-E14)	2	1 861	6,3	Cerebrovascular diseases (I60-I69)	2	203	9,1
Human immunodeficiency virus [HIV] disease (B20-B24)	3	233	5,6	Cerebrovascular diseases (I60-I69)	3	1 272	4,3	Tuberculosis (A15-A19)	3	183	8,2
Tuberculosis (A15-A19)	4	225	5,4	Ischaemic heart diseases (I20-I25)	4	1 245	4,2	Ischaemic heart diseases (I20-I25)	4	183	8,2
Hypertensive diseases (I10-I15)	5	202	4,8	Other forms of heart disease (I30-I52)	5	1 056	3,6	Covid-19 (U071-U072)	5	145	6,5
Other forms of heart disease (I30-I52)	6	148	3,5	Tuberculosis (A15-A19)	6	1 027	3,5	Other viral diseases (B25-B34)	6	92	4,1
Influenza and pneumonia (J09-J18)	7	128	3,1	Human immunodeficiency virus [HIV]	7	955	3,2	Hypertensive diseases (I10-I15)	7	87	3,9
Other viral diseases (B25-B34)	8	122	2,9	Influenza and pneumonia (J09-J18)	8	830	2,8	Influenza and pneumonia (J09-J18)	8	87	3,9
Other acute lower respiratory infections	9	105	2,5	Hypertensive diseases (I10-I15)	9	809	2,8	Human immunodeficiency virus [HIV] disease	9	73	3,3
Ischaemic heart diseases (I20-I25)	10	81	1,9	Other viral diseases (B25-B34)	10	589	2	Other forms of heart disease (I30-I52)	10	60	2,7
Other Natural	11	1 923	46	Other Natural	11	14 096	48	Other Natural	11	747	33,5
Non-natural	12	382	9,1	Non-natural	12	2 921	9,9	Non-natural	12	132	5,9
All causes		4 181	100,0	All causes		29 393	100,0	All causes		2 229	100,0

Appendix P4: The ten leading underlying natural causes of death by district municipality of death occurrence, KwaZulu-Natal, 2020 (continued)

uMgungundlovu		No	%	uMkhanyakude		No	%	uMzinyathi		No	%
Diabetes mellitus (E10-E14)	1	1 154	10,7	Human immunodeficiency virus [HIV] disease	1	344	12,4	Diabetes mellitus (E10-E14)	1	211	6,2
Hypertensive diseases (I10-I15)	2	742	6,9	Cerebrovascular diseases (I60-I69)	2	225	8,1	Hypertensive diseases (I10-I15)	2	190	5,5
Covid-19 (U071-U072)	3	703	6,5	Diabetes mellitus (E10-E14)	3	176	6,3	Cerebrovascular diseases (I60-I69)	3	171	5
Cerebrovascular diseases (I60-I69)	4	673	6,2	Hypertensive diseases (I10-I15)	4	170	6,1	Influenza and pneumonia (J09-J18)	4	169	4,9
Human immunodeficiency virus [HIV] disease	5	491	4,5	Tuberculosis (A15-A19)	5	150	5,4	Tuberculosis (A15-A19)	5	164	4,8
Tuberculosis (A15-A19)	6	373	3,4	Covid-19 (U071-U072)	6	118	4,2	Other viral diseases (B25-B34)	6	134	3,9
Influenza and pneumonia (J09-J18)	7	355	3,3	Other viral diseases (B25-B34)	7	90	3,2	Other forms of heart disease (I30-I52)	7	85	2,5
Ischaemic heart diseases (I20-I25)	8	307	2,8	Other forms of heart disease (I30-I52)	8	77	2,8	Human immunodeficiency virus [HIV] disease	8	82	2,4
Other forms of heart disease (I30-I52)	9	299	2,8	Influenza and pneumonia (J09-J18)	9	63	2,3	Other acute lower respiratory infections	9	61	1,8
Malignant neoplasms of digestive organs (C15-C26)	10	242	2,2	Malignant neoplasms of female genital organs (C51-C58)	10	62	2,2	Intestinal infectious diseases (A00-A09)	10	60	1,7
Other Natural	11	4 193	38,7	Other Natural	11	1 097	39,4	Other Natural	11	1 661	48,4
Non-natural	12	1 289	11,9	Non-natural	12	210	7,5	Non-natural	12	441	12,9
All causes		10 821	100,0	All causes		2 782	100,0	All causes		3 429	100,0
uThukela		No	%	King Cetshwayo		No	%				
Cerebrovascular diseases (I60-I69)	1	639	10,8	Cerebrovascular diseases (I60-I69)	1	369	6,4				
Diabetes mellitus (E10-E14)	2	476	8	Diabetes mellitus (E10-E14)	2	366	6,3				
Hypertensive diseases (I10-I15)	3	377	6,4	Tuberculosis (A15-A19)	3	301	5,2				
Tuberculosis (A15-A19)	4	373	6,3	Covid-19 (U071-U072)	4	293	5,1				
Ischaemic heart diseases (I20-I25)	5	305	5,1	Hypertensive diseases (I10-I15)	5	238	4,1				
Other forms of heart disease (I30-I52)	6	224	3,8	Human immunodeficiency virus [HIV] disease	6	226	3,9				
Intestinal infectious diseases (A00-A09)	7	218	3,7	Influenza and pneumonia (J09-J18)	7	202	3,5				
Other viral diseases (B25-B34)	8	209	3,5	Other forms of heart disease (I30-I52)	8	152	2,6				
Human immunodeficiency virus [HIV] disease	9	208	3,5	Other bacterial diseases (A30-A49)	9	119	2,1				
Covid-19 (U071-U072)	10	201	3,4	Renal failure (N17-N19)	10	104	1,8				
Other Natural	11	1 963	33,1	Other Natural	11	2 539	44				
Non-natural	12	740	12,5	Non-natural	12	868	15				
All causes		5 933	100,0	All causes		5 777	100,0				

Appendix P5: The ten leading underlying natural causes of death by district municipality of death occurrence, North West, 2020

Bojanala		No	%	Dr Kenneth Kaunda		No	%	Dr Ruth Segomotsi Mompoti		No	%
Diabetes mellitus (E10-E14)	1	387	7,5	Human immunodeficiency virus [HIV] disease (B20-B24)	1	511	6,6	Hypertensive diseases (I10-I15)	1	357	8,5
Hypertensive diseases (I10-I15)	2	361	7	Covid-19 (U071-U072)	2	507	6,5	Other forms of heart disease (I30-I52)	2	275	6,5
Cerebrovascular diseases (I60-I69)	3	277	5,3	Hypertensive diseases (I10-I15)	3	493	6,4	Human immunodeficiency virus [HIV] disease (B20-B24)	3	269	6,4
Tuberculosis (A15-A19)	4	269	5,2	Tuberculosis (A15-A19)	4	412	5,3	Other viral diseases (B25-B34)	4	265	6,3
Other viral diseases (B25-B34)	5	262	5	Diabetes mellitus (E10-E14)	5	349	4,5	Influenza and pneumonia (J09-J18)	5	217	5,2
Influenza and pneumonia (J09-J18)	6	229	4,4	Cerebrovascular diseases (I60-I69)	6	340	4,4	Tuberculosis (A15-A19)	6	216	5,1
Other forms of heart disease (I30-I52)	7	213	4,1	Influenza and pneumonia (J09-J18)	7	301	3,9	Diabetes mellitus (E10-E14)	7	188	4,5
Chronic lower respiratory diseases (J40-J47)	8	151	2,9	Ischaemic heart diseases (I20-I25)	8	291	3,8	Cerebrovascular diseases (I60-I69)	8	169	4
Covid-19 (U071-U072)	9	138	2,7	Other viral diseases (B25-B34)	9	247	3,2	Covid-19 (U071-U072)	9	73	1,7
Renal failure (N17-N19)	10	116	2,2	Other forms of heart disease (I30-I52)	10	229	3	Other acute lower respiratory infections (J20-J22)	10	57	1,4
Other Natural	11	2 312	44,5	Other Natural	11	3 446	44,5	Other Natural	11	1 840	43,7
Non-natural	12	475	9,2	Non-natural	12	619	8	Non-natural	12	281	6,7
All causes		5 190	100,0	All causes		7 745	100,0	All causes		4 207	100,0
Ngaka Modiri Molema		No	%								
Cerebrovascular diseases (I60-I69)	1	329	5,6								
Hypertensive diseases (I10-I15)	2	311	5,3								
Diabetes mellitus (E10-E14)	3	262	4,4								
Tuberculosis (A15-A19)	4	237	4								
Influenza and pneumonia (J09-J18)	5	202	3,4								
Other viral diseases (B25-B34)	6	198	3,4								
Human immunodeficiency virus [HIV] disease (B20-B24)	7	146	2,5								
Other forms of heart disease (I30-I52)	8	144	2,4								
Chronic lower respiratory diseases (J40-J47)	9	113	1,9								
Intestinal infectious diseases (A00-A09)	10	86	1,5								
Other Natural	11	3 394	57,6								
Non-natural	12	473	8								
All causes		5 895	100,0								

Appendix P6: The ten leading underlying natural causes of death by district municipality of death occurrence, Gauteng, 2020

City of Johannesburg				City of Tshwane				Ekurhuleni			
		No	%			No	%			No	%
Covid-19 (U071-U072)	1	2 606	7,8	Diabetes mellitus (E10-E14)	1	1 881	6,8	Covid-19 (U071-U072)	1	1 260	6,7
Cerebrovascular diseases (I60-I69)	2	1 510	4,5	Covid-19 (U071-U072)	2	1 683	6,1	Diabetes mellitus (E10-E14)	2	905	4,8
Influenza and pneumonia (J09-J18)	3	1 246	3,7	Hypertensive diseases (I10-I15)	3	1 577	5,7	Cerebrovascular diseases (I60-I69)	3	862	4,6
Diabetes mellitus (E10-E14)	4	1 160	3,5	Cerebrovascular diseases (I60-I69)	4	1 483	5,4	Influenza and pneumonia (J09-J18)	4	835	4,4
Ischaemic heart diseases (I20-I25)	5	1 063	3,2	Ischaemic heart diseases (I20-I25)	5	1 295	4,7	Hypertensive diseases (I10-I15)	5	737	3,9
Other forms of heart disease (I30-I52)	6	958	2,9	Other forms of heart disease (I30-I52)	6	1 180	4,3	Ischaemic heart diseases (I20-I25)	6	639	3,4
Human immunodeficiency virus [HIV] disease (B20-B24)	7	788	2,4	Influenza and pneumonia (J09-J18)	7	1 076	3,9	Other forms of heart disease (I30-I52)	7	581	3,1
Malignant neoplasms of digestive organs	8	779	2,3	Tuberculosis (A15-A19)	8	811	2,9	Other diseases of the respiratory system	8	577	3,1
Tuberculosis (A15-A19)	9	770	2,3	Human immunodeficiency virus [HIV] disease (B20-B24)	9	735	2,7	Tuberculosis (A15-A19)	9	520	2,8
Hypertensive diseases (I10-I15)	10	751	2,2	Malignant neoplasms of digestive organs	10	722	2,6	Other viral diseases (B25-B34)	10	468	2,5
Other Natural	11	18 355	54,8	Other Natural	11	13 207	47,7	Other Natural	11	9 764	51,8
Non-natural	12	3 505	10,5	Non-natural	12	2 063	7,4	Non-natural	12	1 689	9
All causes		33 491	100,0	All causes		27 713	100,0	All causes		18 837	100,0
Sedibeng				West Rand							
		No	%			No	%				
Diabetes mellitus (E10-E14)	1	784	6,9	Covid-19 (U071-U072)	1	348	7,4				
Covid-19 (U071-U072)	2	744	6,5	Cerebrovascular diseases (I60-I69)	2	220	4,7				
Hypertensive diseases (I10-I15)	3	723	6,3	Influenza and pneumonia (J09-J18)	3	197	4,2				
Influenza and pneumonia (J09-J18)	4	648	5,7	Diabetes mellitus (E10-E14)	4	177	3,8				
Cerebrovascular diseases (I60-I69)	5	538	4,7	Ischaemic heart diseases (I20-I25)	5	158	3,4				
Other forms of heart disease (I30-I52)	6	532	4,7	Tuberculosis (A15-A19)	6	151	3,2				
Ischaemic heart diseases (I20-I25)	7	427	3,7	Other viral diseases (B25-B34)	7	130	2,8				
Tuberculosis (A15-A19)	8	409	3,6	Hypertensive diseases (I10-I15)	8	128	2,7				
Chronic lower respiratory diseases (J40-J47)	9	272	2,4	Certain disorders involving the immune mechanism (D80-D89)	9	116	2,5				
Renal failure (N17-N19)	10	232	2	Other forms of heart disease (I30-I52)	10	109	2,3				
Other Natural	11	5 133	45	Other Natural	11	2 422	51,7				
Non-natural	12	977	8,6	Non-natural	12	527	11,3				
All causes		11 419	100,0	All causes		4 683	100,0				

Appendix P7: The ten leading underlying natural causes of death by district municipality of death occurrence, Mpumalanga, 2020

Ehlanzeni		No	%	Gert Sibande		No	%	Nkangala		No	%
Diabetes mellitus (E10-E14)	1	730	7,1	Diabetes mellitus (E10-E14)	1	513	7	Influenza and pneumonia (J09-J18)	1	540	7,8
Cerebrovascular diseases (I60-I69)	2	691	6,7	Cerebrovascular diseases (I60-I69)	2	424	5,8	Cerebrovascular diseases (I60-I69)	2	377	5,4
Tuberculosis (A15-A19)	3	567	5,5	Hypertensive diseases (I10-I15)	3	423	5,8	Diabetes mellitus (E10-E14)	3	360	5,2
Human immunodeficiency virus [HIV] disease	4	447	4,4	Human immunodeficiency virus [HIV] disease	4	385	5,3	Other forms of heart disease (I30-I52)	4	321	4,6
Ischaemic heart diseases (I20-I25)	5	435	4,2	Influenza and pneumonia (J09-J18)	5	356	4,9	Hypertensive diseases (I10-I15)	5	315	4,5
Hypertensive diseases (I10-I15)	6	417	4,1	Tuberculosis (A15-A19)	6	300	4,1	Tuberculosis (A15-A19)	6	210	3
Influenza and pneumonia (J09-J18)	7	407	4	Other viral diseases (B25-B34)	7	293	4	Other acute lower respiratory infections	7	201	2,9
Other viral diseases (B25-B34)	8	366	3,6	Covid-19 (U071-U072)	8	224	3,1	Human immunodeficiency virus [HIV] disease (B20-B24)	8	187	2,7
Other forms of heart disease (I30-I52)	9	311	3	Intestinal infectious diseases (A00-A09)	9	221	3	Covid-19 (U071-U072)	9	184	2,6
Covid-19 (U071-U072)	10	231	2,3	Other forms of heart disease (I30-I52)	10	214	2,9	Other viral diseases (B25-B34)	10	176	2,5
Other Natural	11	4 824	47	Other Natural	11	3 202	43,8	Other Natural	11	3 548	51,1
Non-natural	12	828	8,1	Non-natural	12	755	10,3	Non-natural	12	530	7,6
All causes		10 254	100,0	All causes		7 310	100,0	All causes		6 949	100,0

Appendix P8: The ten leading underlying natural causes of death by district municipality of death occurrence, Limpopo, 2020

Capricorn		No	%	Mopani		No	%	Vhembe		No	%
Diabetes mellitus (E10-E14)	1	607	7,8	Diabetes mellitus (E10-E14)	1	564	6,7	Diabetes mellitus (E10-E14)	1	419	7,2
Influenza and pneumonia (J09-J18)	2	575	7,3	Influenza and pneumonia (J09-J18)	2	429	5,1	Cerebrovascular diseases (I60-I69)	2	287	4,9
Human immunodeficiency virus [HIV] disease	3	521	6,7	Cerebrovascular diseases (I60-I69)	3	421	5	Hypertensive diseases (I10-I15)	3	242	4,1
Hypertensive diseases (I10-I15)	4	510	6,5	Renal failure (N17-N19)	4	341	4,1	Other viral diseases (B25-B34)	4	216	3,7
Cerebrovascular diseases (I60-I69)	5	362	4,6	Other forms of heart disease (I30-I52)	5	339	4	Tuberculosis (A15-A19)	5	178	3
Tuberculosis (A15-A19)	6	308	3,9	Other viral diseases (B25-B34)	6	326	3,9	Influenza and pneumonia (J09-J18)	6	148	2,5
Other viral diseases (B25-B34)	7	229	2,9	Tuberculosis (A15-A19)	7	279	3,3	Human immunodeficiency virus [HIV] disease (B20-B24)	7	140	2,4
Other forms of heart disease (I30-I52)	8	188	2,4	Hypertensive diseases (I10-I15)	8	272	3,2	Renal failure (N17-N19)	8	138	2,4
Intestinal infectious diseases (A00-A09)	9	178	2,3	Human immunodeficiency virus [HIV] disease (B20-B24)	9	223	2,7	Other forms of heart disease (I30-I52)	9	105	1,8
Covid-19 (U071-U072)	10	147	1,9	Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)	10	102	1,2	Malignant neoplasms of female genital organs (C51-C58)	10	75	1,3
Other Natural	11	3 662	46,8	Other Natural	11	4 498	53,7	Other Natural	11	3 487	59,7
Non-natural	12	541	6,9	Non-natural	12	577	6,9	Non-natural	12	402	6,9
All causes		7 828	100,0	All causes		8 371	100,0	All causes		5 837	100,0
Waterberg		No	%	Sekhukhune		No	%				
Diabetes mellitus (E10-E14)	1	344	7,3	Cerebrovascular diseases (I60-I69)	1	1 057	13,8				
Tuberculosis (A15-A19)	2	338	7,1	Influenza and pneumonia (J09-J18)	2	843	11				
Influenza and pneumonia (J09-J18)	3	337	7,1	Diabetes mellitus (E10-E14)	3	551	7,2				
Hypertensive diseases (I10-I15)	4	333	7	Hypertensive diseases (I10-I15)	4	546	7,1				
Cerebrovascular diseases (I60-I69)	5	247	5,2	Other viral diseases (B25-B34)	5	360	4,7				
Human immunodeficiency virus [HIV] disease (B20-B24)	6	207	4,4	Tuberculosis (A15-A19)	6	281	3,7				
Intestinal infectious diseases (A00-A09)	7	202	4,3	Other forms of heart disease (I30-I52)	7	266	3,5				
Other viral diseases (B25-B34)	8	194	4,1	Intestinal infectious diseases (A00-A09)	8	166	2,2				
Other forms of heart disease (I30-I52)	9	174	3,7	Human immunodeficiency virus [HIV] disease (B20-B24)	9	164	2,1				
Covid-19 (U071-U072)	10	117	2,5	Other bacterial diseases (A30-A49)	10	122	1,6				
Other Natural	11	1 898	40,1	Other Natural	11	2 773	36,1				
Non-natural	12	347	7,3	Non-natural	12	542	7,1				
All causes		4 738	100,0	All causes		7 671	100,0				

Appendix Q: Population group differences

The ten leading underlying causes of death by population group for 2020 are shown in Appendix Q1 . The results show that four of the ten leading natural causes of death were common for the four population groups, namely *diabetes mellitus*, *COVID-19*, *hypertensive disease* and *cerebrovascular diseases*. These common natural causes of death had different ranks and different contributions to the overall number of deaths for each population group. For example, *diabetes mellitus* was the leading cause of death among the black African population group (accounting for 7,1% of all deaths in this group); second among the coloured population group (8.7%); sixth among white (4,0%); and third among the Indian population group (10,2%).

COVID-19 was the leading underlying cause of death for Indians and coloured population group accounting for 10,1% and 5,3 % deaths in each population group respectively. It ranked second for the black African and white population groups, accounting for 6,2% and 7,1% respectively. Human immunodeficiency virus [HIV] disease (B20_B24) which was part of the leading underlying cause of death for both black Africans and coloured population groups was not part of the top ten leading underlying cause of death for white and Indian/Asian population.

Appendix Q1: The ten leading underlying natural causes of death by population group, 2020

Causes of death	Black African			White			Indian/Asian			Coloured			Unknown/Unspecified		
	Rank	Number	Percentage	Rank	Number	Percentage	Rank	Number	Percentage	Rank	Number	Percentage	Rank	Number	Percentage
Diabetes mellitus (E10-E14)	1	23 177	7,1	6	1 846	4,0	3	1 183	10,2	2	3 209	8,7	3	2 685	3,8
Covid-19 (U071-U072)	2	20 084	6,2	2	3 517	7,6	1	1 692	14,5	1	3 731	10,1	2	3 733	5,3
Hypertensive diseases (I10-I15)	3	18 715	5,8	9	1 674	3,6	5	380	3,3	5	2 101	5,7	5	1 977	2,8
Cerebrovascular diseases (I60-I69)	4	17 532	5,4	3	2 757	6,0	4	538	4,6	3	2 416	6,6	1	3 823	5,4
Human immunodeficiency virus [HIV] disease (B20-B24)	5	16 440	5,1	9	1 332	3,6	8	1 430	2
Tuberculosis (A15-A19)	6	15 925	4,9	6	1 756	4,8	7	1 771	2,5
Influenza and pneumonia (J09-J18)	7	14 341	4,4	7	1 779	3,9	8	329	2,8	4	2 553	3,6
Other viral diseases (B25-B34)	8	11 316	3,5
Other forms of heart disease (I30-I52)	9	9 895	3,0	4	2 607	5,7	6	377	3,2	9	1 372	1,9
Renal failure (N17-N19)	10	5 922	1,8	9	312	2,7
Ischaemic heart diseases (I20-I25)	1	5 150	11,2	2	1 467	12,6	4	2 333	6,3	6	1 774	2,5
Malignant neoplasms of digestive organs	5	2 393	5,2	7	331	2,8	10	1 231	3,3
Chronic lower respiratory diseases	8	1 730	3,8	10	237	2	7	1 649	4,5	10	1 345	1,9
Malignant neoplasms of respiratory and intrathoracic organs (C30-C39)	10	1 312	2,8	8	1 344	3,7
Other Natural		137 829	42,5		18 869	41,0		4 137	35,5		12 959	35,2		40 241	56,8
Non-natural		33 275	10,3		2 430	5,3		658	5,7		2 741	7,4		8 082	11,4
Total		324 451	100,0		46 064	100,0		11 641	100,0		36 802	100,0		70 786	100,0