Northern Cape Provincial Treasury

Mortality Trends and Causes of Death: An Analysis for the Northern Cape Province

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1. Introduction

The aim of this Policy Brief is to provide the status quo relating to mortality in the Northern Cape Province as well as to look at its causes. This analysis will paint a picture of where we stand as a province and society, and how to respond. It can provide guidance, especially to the provincial government on areas of planning including budgeting and policy formulation.

2. Background

The South African government adopted the National Development Plan (NDP) in 2012 as the country's long-term plan to respond to major socio-economic challenges such as reducing inequality, eliminating poverty and creating jobs that South Africans need. In terms of health, the NDP (2012) envisages that South Africa aims to attain the following by 2030:

- Raise life expectancy to at least 70 years;
- Ensure that the generation of under-20s is largely free of Human Immunodeficiency Virus (HIV);
- Significantly reduce the burden of disease; and
- Achieve an infant mortality rate of less than 20 deaths per 1 000 live births, and an under-5 mortality rate of less than 30 per 1 000.

The Medium-Term Strategic Framework (MTSF) 2014-2019, has been the first implementation plan for the NDP. This framework was developed around two over-arching strategic themes: radical economic transformation and improving service delivery. The MTSF had been divided into 14 Outcomes, of which Outcome 2 (A Long and Healthy Life for All South Africans) focuses on health. It is also imperative to ensure that the Northern Cape and South Africa in general, contribute to the accomplishment of the sustainable development goals (SDGs).

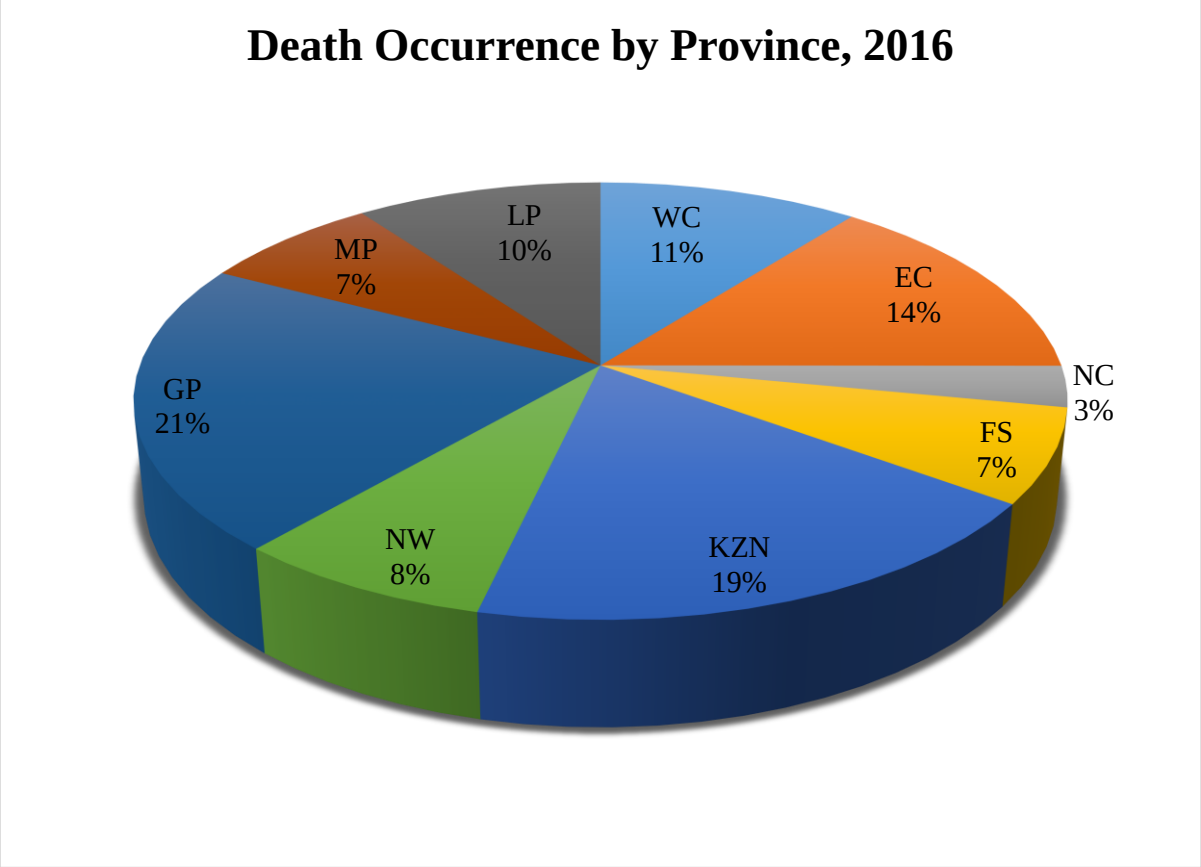
3. Analysis of Mortality

3.1. Death Occurrence

Information on mortality is crucial as this indicator is one of those influential for the society's development. This is so as it does not only affect families, relatives and friends of the deceased, but also the economy and the society at large.

Figure 3.1 depicts the distribution of deaths in South Africa by province for the year 2016.

Figure 3.1: Death Occurrence by Province, 2016

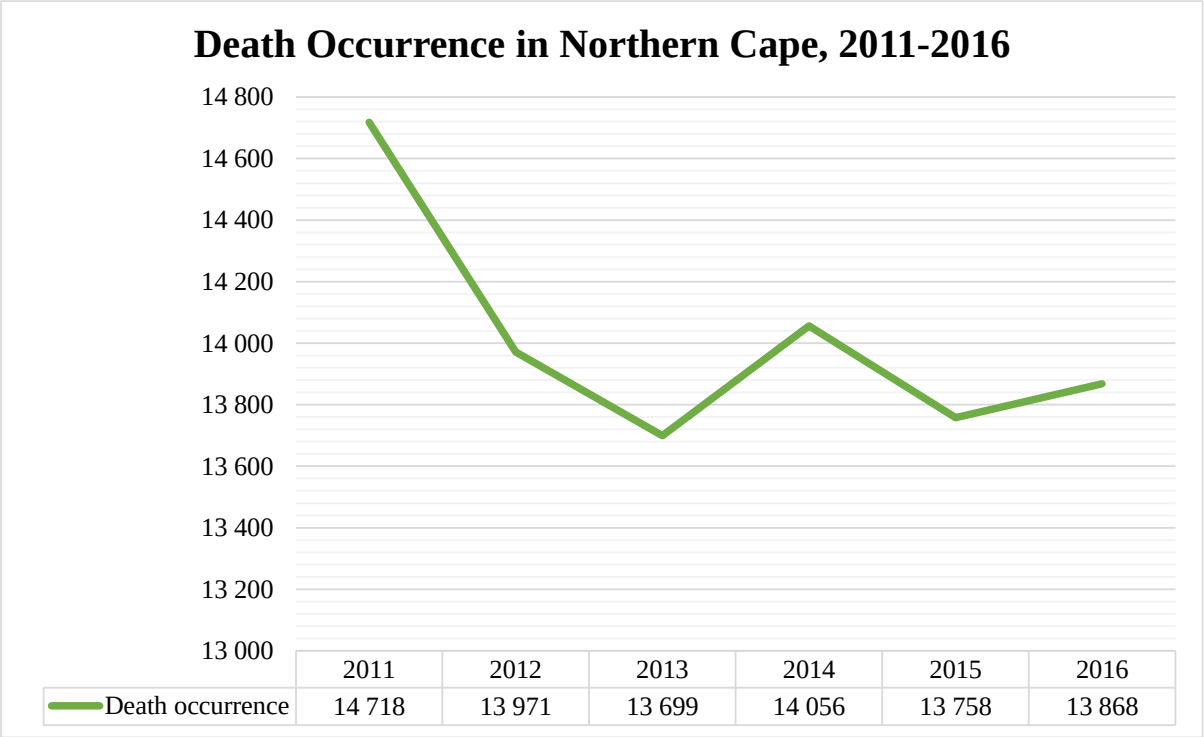


Source: Stats SA, Mortality & causes of death in South Africa, 2018

The Northern Cape only had 3 per cent of the deaths occurring in 2016, representing the smallest percentage in South Africa. Gauteng recorded the largest percentage of deaths at 21 per cent, followed by KwaZulu-Natal (19 per cent), Eastern Cape (14 per cent) and Western Cape (11 per cent). This can be expected as these provinces have larger population sizes. The deaths classified as *Foreign* and *Unspecified* were very few. 216 deaths of South Africans were reported in foreign countries and 88 were not specified in terms of the area or province of occurrence (Stats SA, 2018a).

Figure 3.2 provides the distribution of deaths for the Northern Cape Province from 2011 to 2016.

Figure 3.2: Death Occurrence in Northern Cape, 2011-2016

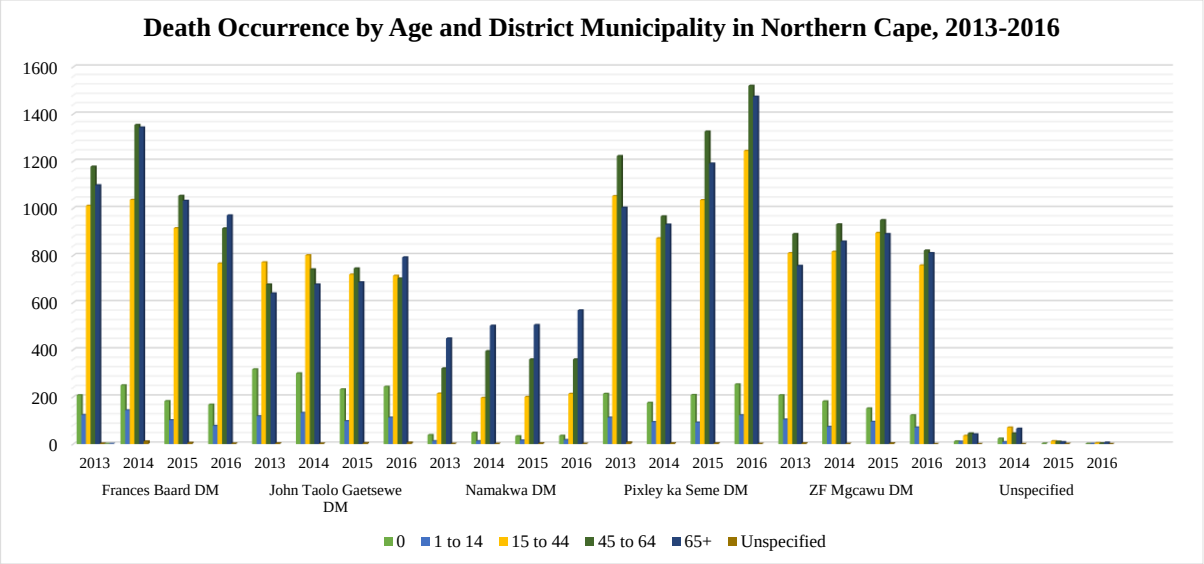


Source: Stats SA, Mortality & causes of death in South Africa, 2014-2018

The death occurrence in the Northern Cape has been declining as shown by a downward trend between 2011 and 2016. In 2011, the total deaths that had occurred in the province was at 14 718. This number had declined to 13 868 in 2016. Not all of the people who died in the province during these years were its residents but the majority were. In general, the Northern Cape has been experiencing the smallest number of deaths in comparison to other provinces.

The distribution of deaths by age and the district municipality in which the death occurred is shown in the following graph.

Figure 3.3: Death Occurrence by Age and District Municipality in Northern Cape, 2013-2016



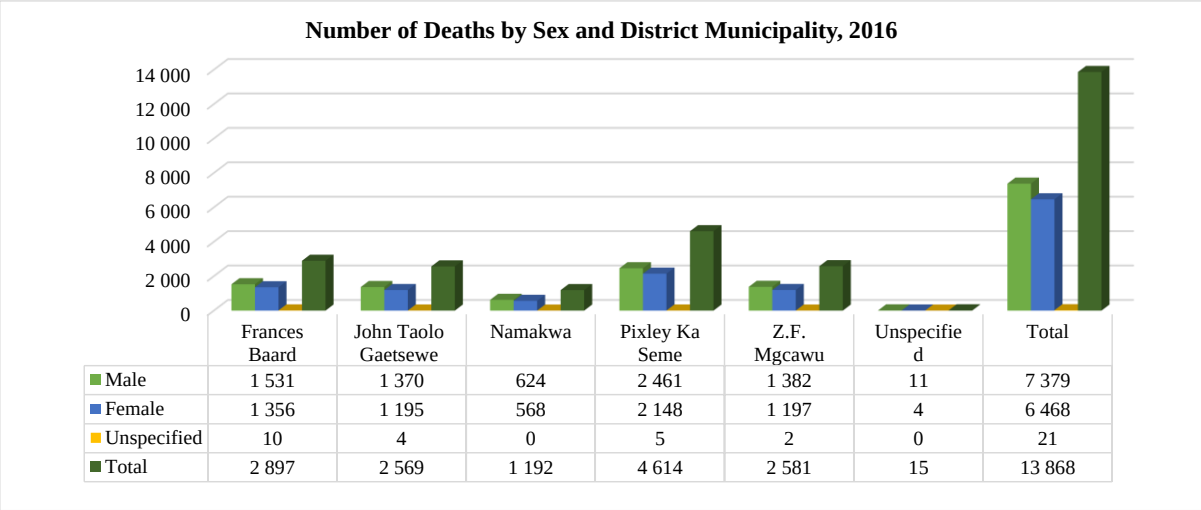
Source: Stats SA, Mortality & causes of death in South Africa, 2014-2018

The number of deaths that occurred in the Frances Baard District Municipality was at its highest in 2014, and this applied to all age categories. From 2014 to 2016, there was a decrease in the number of deaths recorded in all of the age categories in this district. For John Taolo Gaetsewe, there was not much variation in the number of deaths recorded during the four years. Namakwa also did not have much variation in the number of deaths recorded during the 2013 to 2016 period. However, there was a clear increase in the number of deaths recorded in the 65 and older age group.

In Pixley ka Seme, the largest number of deaths were recorded in 2016 and this was for all the age groups. In ZF Mgcawu, there was also not a lot of variation in the number of deaths recorded during the four years. All of the age groups in this district experienced a decrease in the number of deaths from 2015 to 2016. In total, Frances Baard experienced the largest number of deaths in 2013 and 2014, whereas Pixley ka Seme surpassed in 2015 and 2016. Namakwa had the smallest number of deaths in all years.

Figure 3.4 portrays the number of deaths in terms of sex and the district municipality in which it occurred for 2016.

Figure 3.4: Number of Deaths by Sex and District Municipality, 2016



	Frances Baard	John Taolo Gaetsewe	Namakwa	Pixley Ka Seme	Z.F. Mgcawu	Unspecified	Total
Male	1 531	1 370	624	2 461	1 382	11	7 379
Female	1 356	1 195	568	2 148	1 197	4	6 468
Unspecified	10	4	0	5	2	0	21
Total	2 897	2 569	1 192	4 614	2 581	15	13 868

Source: Stats SA, Mortality & causes of death in South Africa, 2018

Regarding the deaths of children aged zero, Stats SA (2018b) indicated that the Northern Cape had the highest sex ratio of 142 male stillbirth deaths per 100 female stillbirth deaths in 2016. The sex ratio at death (the number of male deaths per 100 female deaths) is a demographic measure that shows the relative number of male deaths to female deaths. A ratio of 100 shows an equal number of male to female deaths, a number less than 100 indicates more female death occurrences; and a number more than 100 indicates more male death occurrences (Stats SA, 2018b). The province also ranked the highest in terms of perinatal sex ratio (139 male deaths per 100 female deaths) during the same year in South Africa.

There were more male deaths in comparison to female deaths in the Northern Cape in 2016. This should be concerning, as the male population is smaller than that of females in the province. In terms of the districts, the largest number of deaths were recorded in Pixley ka Seme, followed by Frances Baard and ZF Mgcawu. This is concerning as Pixley ka Seme is the second district with the smallest population in the province. Regarding sex, the largest number of both the male and female deaths were recorded in Pixley ka Seme whereas the smallest number was in Namakwa.

3.2. Leading Underlying Natural Causes of Death in Northern Cape

It is important to know what the causes of these deaths were that were analysed in the section above. This can enable the government to formulate strategies, policies and interventions in an effort to reduce mortality. Table 3.1 presents the top underlying natural causes of death in the province from 2012 to 2016.

Table 3.1: Leading Underlying Natural Causes of Death in Northern Cape, 2012-2016

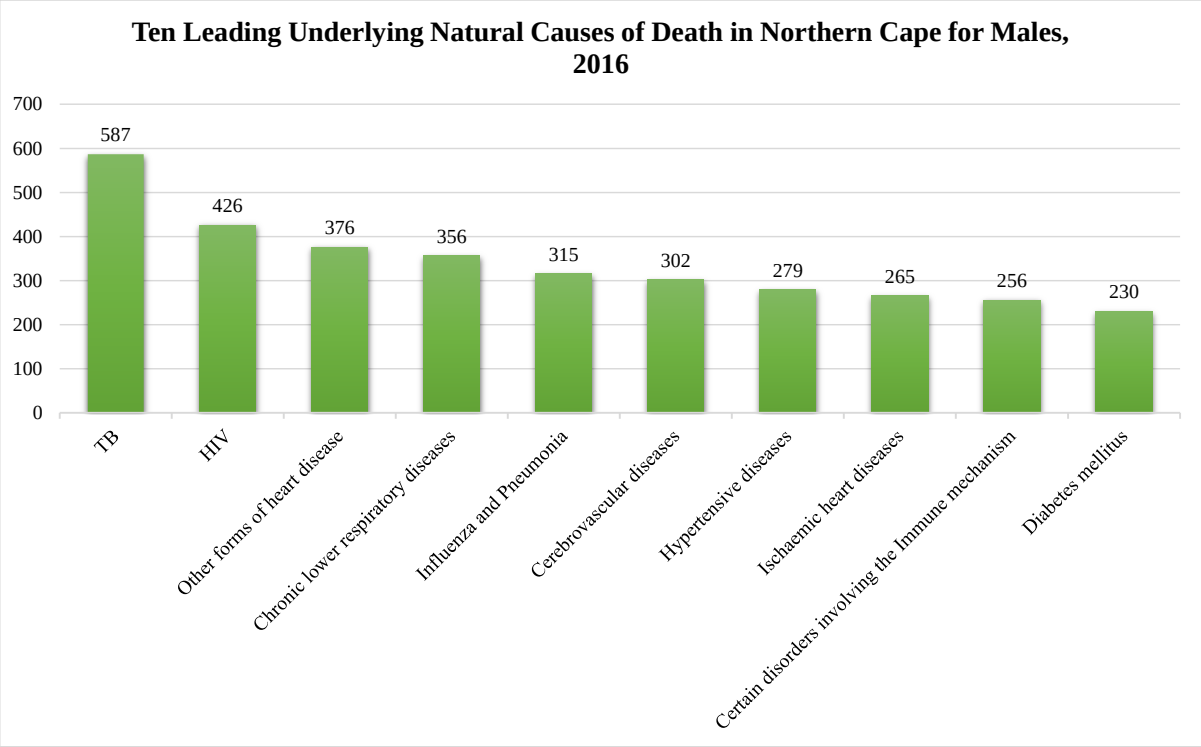
2012		2013		2014		2015		2016	
Cause	**No.**	**Cause**	**No.**	**Cause**	**No.**	**Cause**	**No.**	**Cause**	**No.**
TB	1 233	HIV	1 187	HIV	1 188	TB	1 065	TB	937
HIV	945	TB	1 061	TB	1 046	HIV	879	HIV	848
Cerebrovascular diseases	657	Cerebrovascular diseases	636	Cerebrovascular diseases	721	Diabetes mellitus	695	Other forms of heart disease	762
Influenza and Pneumonia	554	Hypertensive diseases	621	Hypertensive diseases	698	Hypertensive diseases	690	Hypertensive diseases	761
Chronic lower respiratory diseases	533	Influenza and Pneumonia	600	Influenza and Pneumonia	630	Chronic lower respiratory diseases	653	Cerebrovascular diseases	718

Source: Stats SA, Mortality & causes of death in South Africa, 2014-2018

Tuberculosis (TB) was the first leading cause of death in Northern Cape in 2012, 2015 and 2016 (these included all *TB*-related diseases including *Multi-drug-resistant TB (MDR-TB)* and *extensively drug-resistant TB (XDR-TB)*). *HIV* was the second leading cause during these years. In 2013 and 2014, *HIV* represented the first leading cause while *TB* was the second. *Cerebrovascular diseases* constituted the third leading natural cause of mortality in the province for the first 3 years, and it was the fifth in 2016. Other natural causes forming part of the top five include *Influenza and Pneumonia*, *Chronic lower respiratory diseases*, *Hypertensive diseases*, *Diabetes mellitus*, and *Other forms of heart diseases*. Comparing 2012 and 2016, there was a decrease in deaths caused by both *TB* and *HIV*.

The two graphs that follow illustrate the leading natural causes of death for males and females in Northern Cape for 2016.

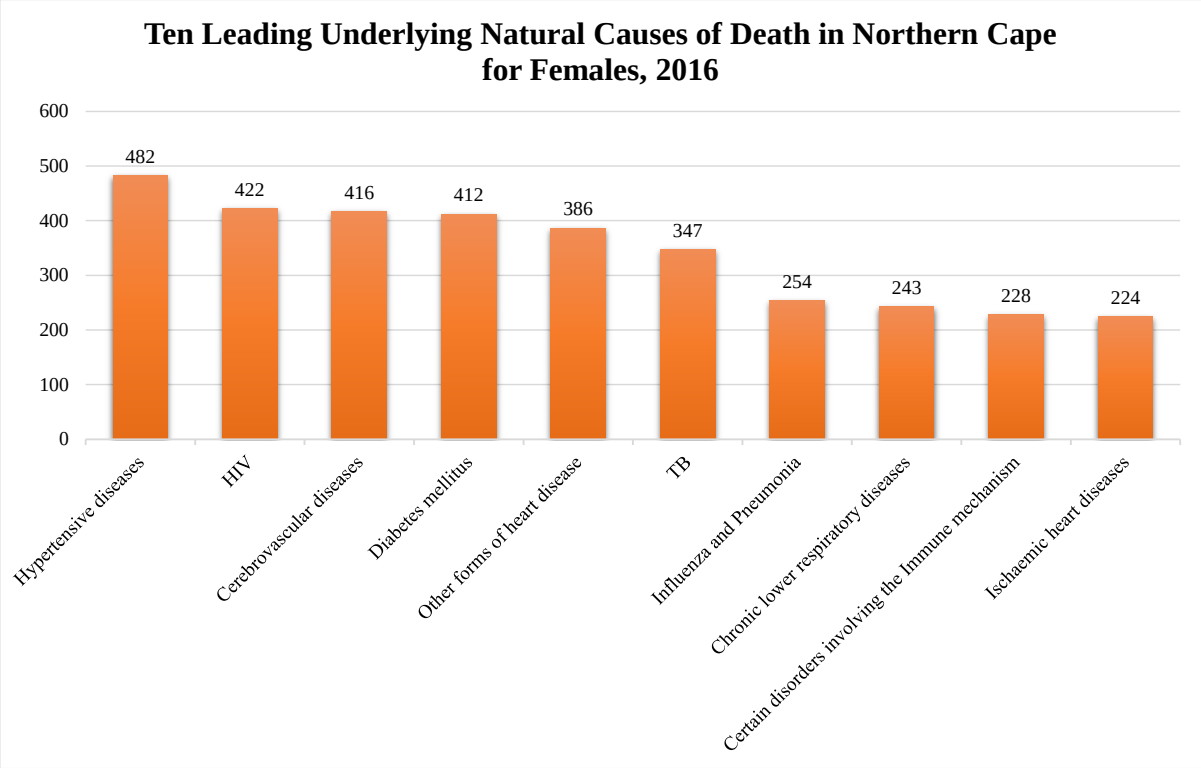
Figure 3.5: Ten Leading Underlying Natural Causes of Death in Northern Cape for Males, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

TB was the first leading natural cause of male deaths causing 587 deaths in the Northern Cape in 2016, followed by *HIV* with 426 deaths. *Other forms of heart diseases* was the third at 376 deaths, followed by *Chronic lower respiratory diseases* with 356 deaths. *Influenza and Pneumonia* was the fifth leading natural cause of male deaths.

Figure 3.6: Ten Leading Underlying Natural Causes of Death in Northern Cape for Females, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

For females, *Hypertensive diseases* was the first leading natural cause of death in 2016 with 482 deaths. *HIV* followed with 422 deaths and *Cerebrovascular diseases* with 416 deaths. *Diabetes mellitus* was the fourth leading cause with 412 female deaths in the province.

Table 3.2 presents the leading natural causes of death by age groups in the Northern Cape for 2016.

Table 3.2: Leading Underlying Natural Causes of Death by Age in Northern Cape, 2016

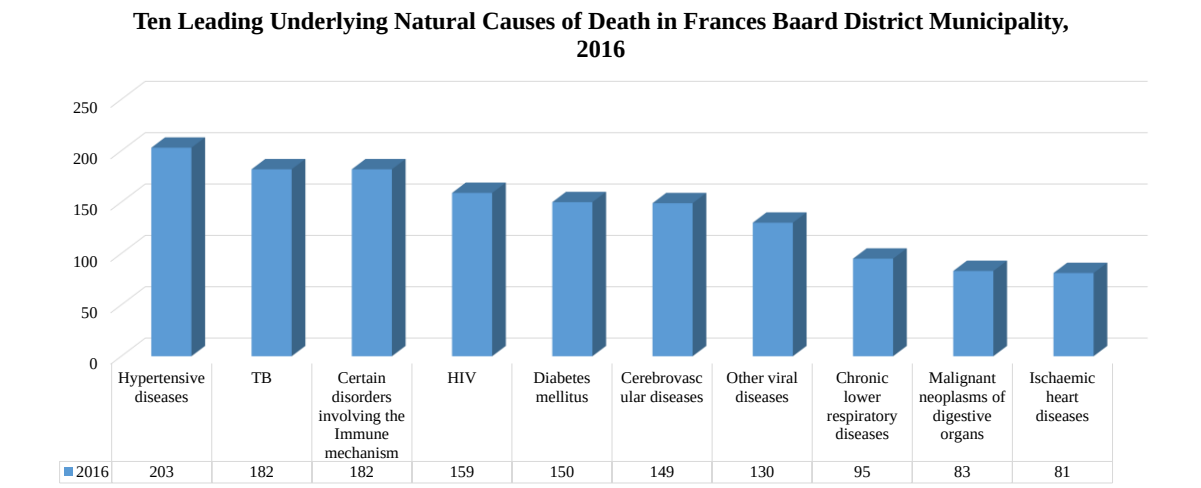
0 Years		1-14 Years		15-44 Years		45-64 Years		65+ Years	
Cause	No.	Cause	No.	Cause	No.	Cause	No.	Cause	No.
Respiratory & cadiovascular disorders specific to the perinatal period	101	Malnutrition	47	HIV	513	TB	379	Hypertensive diseases	516
Disorders related to length of gestation & fetal growth	69	Intestinal infectious diseases	31	TB	435	HIV	279	Cerebrovascular diseases	432
Influenza and pneumonia	67	Other forms of heart disease	22	Certain disorders involving the Immune mechanism	288	Chronic lower respiratory diseases	259	Other forms of heart disease	370
Intestinal infectious diseases	61	Influenza and pneumonia	22	Other viral diseases	240	Diabetes mellitus	242	Diabetes mellitus	352
Other disorders originating in the perinatal period	55	Cerebral palsy & other paralytic syndromes	16	Other forms of heart disease	146	Cerebrovascular diseases	229	Chronic lower respiratory diseases	312

Source: Stats SA, Mortality & causes of death in South Africa, 2018

In 2016, the first leading natural cause of death for children under a year was the *Respiratory and cardiovascular disorders specific to the perinatal period*, with 101 deaths reported under this cause. Stats SA (2016b) further showed that 28 per cent of stillbirth deaths were caused by the fetus and newborn being affected by maternal factors and by complications of pregnancy, labour and delivery. This was also the main cause that was responsible for 21.9 per cent of perinatal deaths in 2016. *Disorders related to the length of gestation and fetal growth* was the second leading cause, being responsible for 69 deaths. For children aged 1 to 14 years, *Malnutrition* was found to be the first leading natural cause of death, with 47 deaths reported in 2016. *Internal infectious diseases* followed with 31 deaths. Regarding the group aged 15 to 44, *HIV* was the first leading cause of death (513 deaths), whereas *TB* was the second (435 deaths). For the 45 to 64 age cohort, *TB* was the first leading natural cause of death accounting for 389 deaths, followed by *HIV* with 279 deaths. Adults aged 65 and above had *Hypertensive diseases* as their first leading natural cause of death, and *Cerebrovascular diseases* was the second.

The following figures turn to representing the leading causes of death for each of the five districts of the Northern Cape Province.

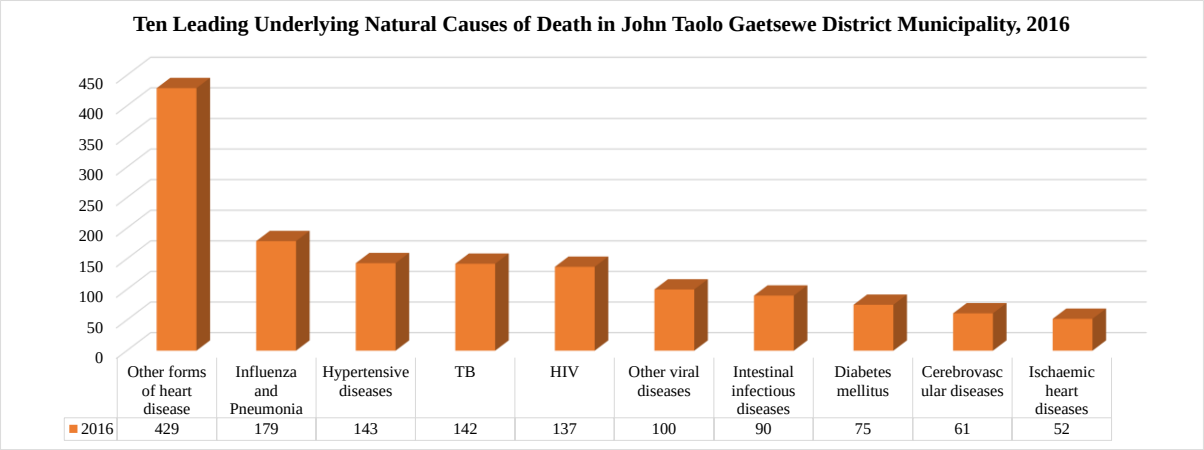
Figure 3.7: Ten Leading Underlying Natural Causes of Death in Frances Baard District Municipality, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

Hypertensive diseases was the first leading natural cause of death in the Frances Baard district, with 203 deaths reported in 2016, followed by *TB*, and *Certain disorders involving the immune mechanism* each causing 182 deaths.

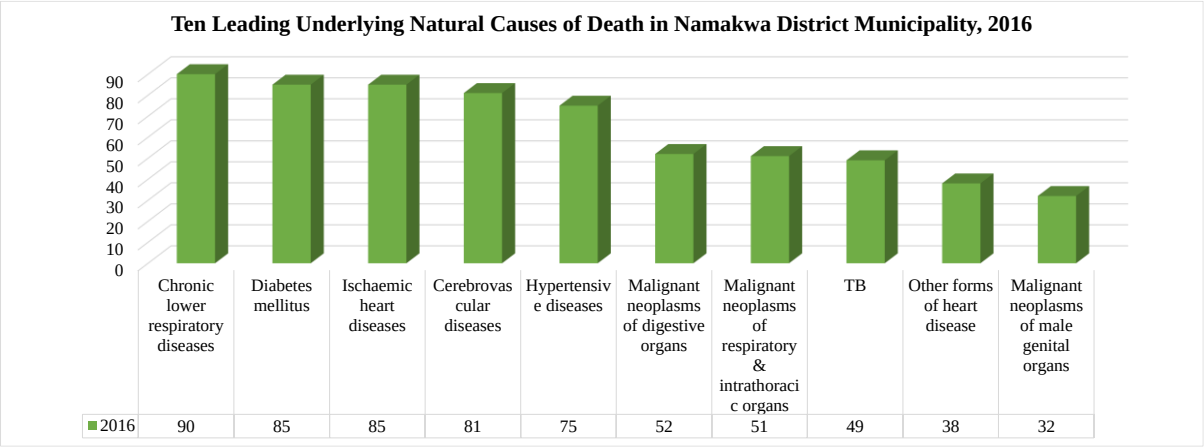
Figure 3.8: Ten Leading Underlying Natural Causes of Death in John Taolo Gaetsewe District Municipality, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

The first leading natural cause of death for the John Taolo Gaetsewe district was *Other forms of heart disease* (429 deaths) in 2016. *Influenza and Pneumonia* was the second leading cause of death, accounting for 179 deaths in the district, followed by *Hypertensive diseases*, *TB* and *HIV*.

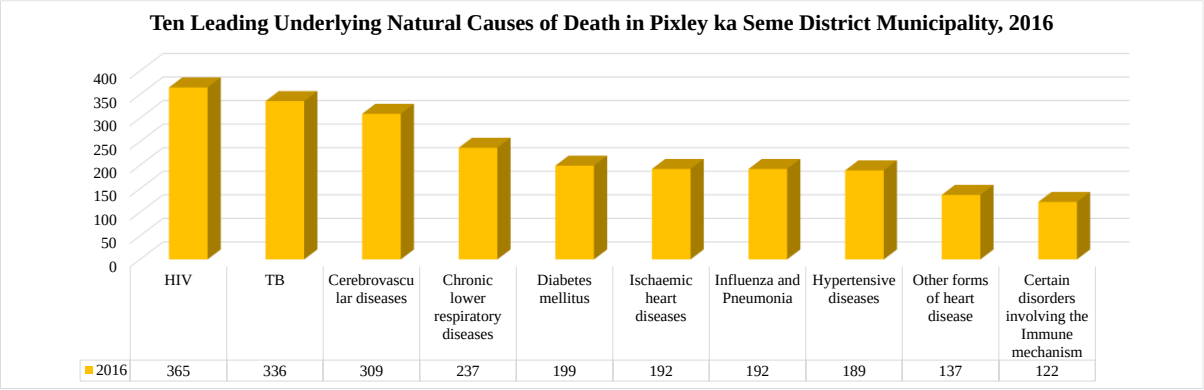
Figure 3.9: Ten Leading Underlying Natural Causes of Death in Namakwa District Municipality, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

For the Namakwa district, *Chronic lower respiratory diseases* was the first leading cause of death in 2016. This was followed by *Diabetes mellitus* and *Ischaemic heart diseases*. Two natural causes that are not found in other districts form part of Namakwa's 10 leading natural causes of death, which are *Malignant neoplasms of respiratory and intrathoracic organs* and *Malignant neoplasms of male genital organs*. Namakwa had the smallest number of deaths in the five districts.

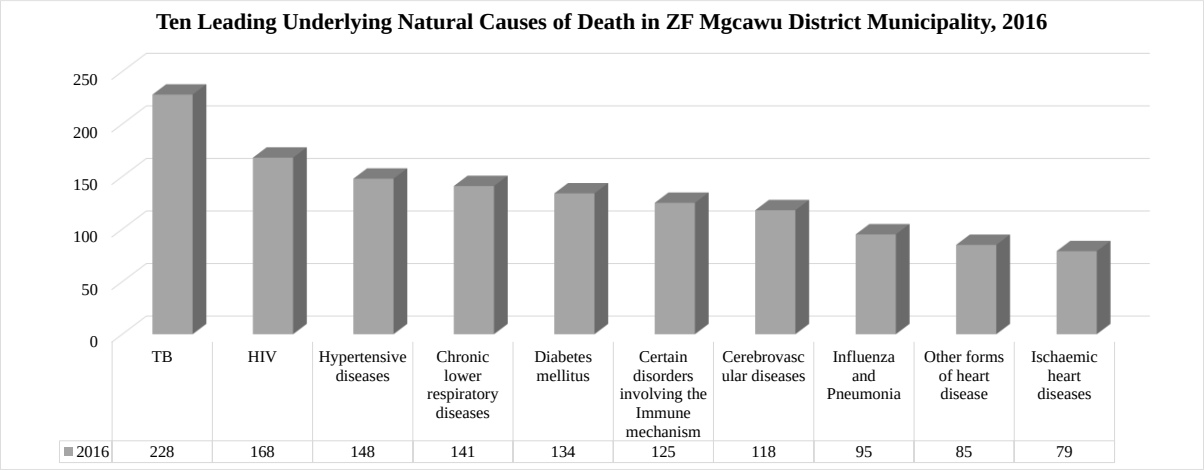
Figure 3.10: Ten Leading Underlying Natural Causes of Death in Pixley ka Seme District Municipality, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

Pixley ka Seme had *HIV* as its first leading natural cause of death in 2016, with 365 deaths reported. *TB* led to 336 deaths and was the second leading natural cause of death. *Cerebrovascular diseases* was the third leading cause, with 309 deaths.

Figure 3.11: Ten Leading Underlying Natural Causes of Death in ZF Mgcawu District Municipality, 2016



Source: Stats SA, Mortality & causes of death in South Africa, 2018

In 2016, ZF Mgcawu had 228 deaths reported under *TB*, making it the first leading natural cause of death in the district. *HIV* followed with 168 deaths, being the second leading natural cause of death. *Hypertensive diseases* was found to be third leading cause whereas *Diabetes mellitus* was the fifth.

3.3. Leading Underlying Non-Natural Causes of Death in Northern Cape

Table 3.3 below shows the leading underlying non-natural causes of death in the Northern Cape for 2012 to 2016.

Table 3.3: Leading Underlying Non-natural Causes of death in Northern Cape, 2012-2016

2012		2013		2014		2015		2016	
Cause	**No.**	**Cause**	**No.**	**Cause**	**No.**	**Cause**	**No.**	**Cause**	**No.**
Other external causes of accidental injury	874	Other external causes of accidental injury	571	Other external causes of accidental injury	547	Other external causes of accidental injury	535	Other external causes of accidental injury	574
Assault	264	Transport accidents	371	Transport accidents	474	Transport accidents	430	Transport accidents	461
Transport accidents	213	Assault	355	Assault	341	Assault	321	Assault	262
Intentional self-harm	78	Intentional self-harm	119	Intentional self-harm	84	Intentional self-harm	79	Intentional self-harm	84
Event of undetermined intent	59	Event of undetermined intent	69	Event of undetermined intent	70	Complications of medical & surgical care	60	Complications of medical & surgical care	36

Source: Stats SA, Mortality & causes of death in South Africa, 2014-2018

From 2012 to 2014, the top five non-natural causes of death in the Northern Cape were the same, though in a different order. *Other external causes of accidental injury* was the first leading non-natural cause throughout the review period. The number of deaths under this cause had been dropping from 2012 until 2015, and in 2016 it rose to 574. *Transport accidents* was the second leading non-natural cause of death from 2013 to 2016, while *Assault* was the second in 2012. *Transport accidents* was the third leading non-natural cause of death in 2012, while *Assault* was third leading non-natural cause of death in 2013 until 2016. *Intentional self-harm* was the fourth leading non-natural cause of death over the period under review. Compared to 2012, the number of deaths caused by this category increased in 2016. The fifth leading non-natural cause of death was *Event of undetermined intent* from 2012 until 2014. From 2015, it was replaced by *Complications of medical and surgical care*.

4. Conclusion

The Northern Cape's number of deaths has declined between 2011 and 2016. The province had the smallest share of deaths in South Africa in 2016 at 3 per cent. Pixley ka Seme had the largest number of deaths while Namakwa had the smallest number. In terms of sex, males had higher mortality in comparison to females. In 2016, *TB* was the first leading natural cause of death in the province, followed by *HIV* and *Other forms of heart disease*. Looking at natural causes of death by sex, males had *TB* as their first leading natural cause of death, followed by *HIV*. For females, *Hypertensive diseases* was their first leading natural cause of death while *HIV* was the second.

When considering people by age group, children of less than a year had *Respiratory and cardiovascular disorders specific to the perinatal period* as the first leading natural cause of death. Those aged 1 to 14 had *Malnutrition* as the first leading cause of death. *HIV* was the main natural cause of death for those aged 15 to 44, whereas *TB* was for adults between 45 and 64 years. The first leading natural cause of death differed across district municipalities. *Hypertensive diseases* were found to be the leading cause in Frances Baard, while *Other forms of heart diseases* was in John Taolo Gaetsewe. For Namakwa, *Chronic lower respiratory*

diseases was the first leading cause whereas *HIV* was in Pixley ka Seme. *TB* was the first leading cause of death in ZF Mgcawu.

For non-natural deaths, *Other external causes of accidental injury* was the province's first leading cause of death in 2016. This was followed by *Transport accidents* and *Assault*.

5. Recommendations

The decrease in deaths caused by *TB* and *HIV* is good for the province, but there is still a large number of people dying from these diseases, especially in the age groups 15 to 44 and 45 to 64. This highlights the need for government to keep increasing its efforts to assist people with and educate them about prevention, early diagnosis and treatment. The increase in the prevalence of *Cerebrovascular diseases* is of concern as it raises the question as to why it has increased and what can be done to reduce it.

Pixley ka Seme had the largest number of deaths even though it is the second district with the smallest population in the province. With HIV and TB being the main natural causes of death, government should determine why this is so high in this district – whether there is a need for more access to medication, condoms or education about the prevention and treatment of these illnesses.

It is important to determine the reason for the causes of death of babies less than 1 year. It is important to know if it is due to late detection (e.g. *Influenza and Pneumonia*), lack of access to good quality health care (e.g. for mothers before giving birth and babies after birth), etc. This will enable government to determine what efforts are required to minimise the deaths of these babies. *Malnutrition* being the leading natural cause of death for children aged 1 to 14 is of great concern. It should also be determined what the cause is – whether it is due to poverty, parents spending money on alcohol or other addictions, whether the parents are not educated on what is good nutrition. Efforts should be intensified to give children access to nutritious meals and to educate parents on nutrition. Government can also intensity its projects to give more households education regarding vegetable gardens to make fresh fruit and vegetables more affordable and accessible. Determining the cause of infection in children with *Intestinal infectious disease* as well as the other leading causes of death among children will help government to develop strategies for prevention as well as early detection and cure.

Looking at the districts and their respective leading natural causes of death, government can consider customised strategies for each district e.g. Pixley ka Seme where *HIV* and *TB* are the

leading natural causes of death, efforts can be intensified on the prevention and treatment of these illnesses.

The high number of *Transport accident* deaths in the province should be looked into to determine what caused these accidents. This could assist government when formulating road safety campaigns to determine what areas to focus on.

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