

# Trends in selected health indicators regarding children under 5 years in South Africa



IMPROVING LIVES THROUGH DATA ECOSYSTEMS



**stats sa**

Department:  
Statistics South Africa  
REPUBLIC OF SOUTH AFRICA



# **Trends in selected health indicators regarding children under 5 years in South Africa**

**Statistics South Africa**

**Risenga Maluleke  
Statistician-General**

**Trends in selected health indicators regarding children under 5 years in South Africa /**  
Statistics South Africa

Published by Statistics South Africa, Private Bag X44, Pretoria 0001

© Statistics South Africa, 2021

Users may apply or process this data, provided Statistics South Africa (Stats SA) is acknowledged as the original source of the data; that it is specified that the application and/or analysis is the result of the user's independent processing of the data; and that neither the basic data nor any reprocessed version or application thereof may be sold or offered for sale in any form whatsoever without prior permission from Stats SA.

Stats SA Library Cataloguing-in-Publication (CIP) Data

**Trends in selected health indicators regarding children under 5 years in South Africa /**  
Statistics South Africa. Pretoria: Statistics South Africa, 2021

**Report no. 03-00-16**

**65 pp**

ISBN: 978-0-621-49358-0

A complete set of Stats SA publications is available at Stats SA Library and the following libraries:

National Library of South Africa, Pretoria Division  
National Library of South Africa, Cape Town Division  
Library of Parliament, Cape Town  
Bloemfontein Public Library  
Natal Society Library, Pietermaritzburg  
Johannesburg Public Library  
Eastern Cape Library Services, King William's Town  
Central Regional Library, Polokwane  
Central Reference Library, Mbombela  
Central Reference Collection, Kimberley  
Central Reference Library, Mmabatho

This report is available on the Stats SA website: [www.statssa.gov.za](http://www.statssa.gov.za)

For technical enquiries please contact:

Ramadimetja Matji

Tel: 012 310 3301

Email: [ramadimetjam@statssa.gov.za](mailto:ramadimetjam@statssa.gov.za)

## Table of Contents

|   |             |
|---|-------------|
| <b>Preface .....</b>                                  | <b>vii</b>  |
| <b>Acknowledgements .....</b>                         | <b>viii</b> |
| <b>Abbreviations .....</b>                            | <b>ix</b>   |
| <b>Summary of findings .....</b>                      | <b>x</b>    |
| <b>CHAPTER 1 .....</b>                                | <b>1</b>    |
| 1.1 Introduction .....                                | 1           |
| 1.2 Objectives of the report .....                    | 2           |
| 1.3 Outline of the report .....                       | 2           |
| 1.4 Data sources .....                                | 3           |
| 1.5 Data limitations .....                            | 3           |
| <b>CHAPTER 2 .....</b>                                | <b>4</b>    |
| 2.1 Access to water and sanitation .....              | 4           |
| 2.2 Poverty .....                                     | 4           |
| 2.3 Hunger .....                                      | 5           |
| 2.4 Malnutrition .....                                | 5           |
| 2.5 Micronutrient intake .....                        | 6           |
| 2.6 Low birth weight .....                            | 6           |
| 2.7 Breastfeeding .....                               | 7           |
| 2.8 Vaccination .....                                 | 7           |
| 2.9 Life expectancy .....                             | 8           |
| 2.10 Mortality .....                                  | 8           |
| 2.11 Stillbirths .....                                | 8           |
| 2.12 Early neonatal mortality .....                   | 9           |
| 2.13 Infant mortality .....                           | 9           |
| 2.14 Under-5 years mortality rate .....               | 9           |
| <b>CHAPTER 3 .....</b>                                | <b>10</b>   |
| 3.1 Demographic characteristics .....                 | 10          |
| 3.2 Access to water .....                             | 12          |
| 3.3 Access to acceptable or improved sanitation ..... | 14          |
| 3.4 Poverty .....                                     | 15          |
| 3.5 Hunger .....                                      | 19          |
| <b>CHAPTER 4 .....</b>                                | <b>20</b>   |
| 4.1 Low birth weight .....                            | 20          |
| 4.2 Breastfeeding .....                               | 23          |
| 4.3 Micronutrients intake .....                       | 26          |
| 4.4 Severe acute malnutrition .....                   | 27          |
| 4.5 Vaccination .....                                 | 29          |

|   |           |
|---|-----------|
| <b>CHAPTER 5 .....</b>                        | <b>31</b> |
| 5.1 Life expectancy .....                     | 31        |
| 5.2 Mortality .....                           | 32        |
| 5.3 Causes of death .....                     | 34        |
| 5.4 Causes of death by sex .....              | 35        |
| 5.5 Causes of death by population group ..... | 37        |
| 5.6 Causes of death by province.....          | 41        |
| Western Cape .....                            | 41        |
| Eastern Cape .....                            | 42        |
| Northern Cape .....                           | 43        |
| Free State .....                              | 44        |
| KwaZulu-Natal .....                           | 45        |
| North West .....                              | 46        |
| Gauteng .....                                 | 47        |
| Mpumalanga .....                              | 48        |
| Limpopo .....                                 | 49        |
| 5.7 Comparison between provinces .....        | 50        |
| <b>Concluding remarks .....</b>               | <b>51</b> |
| <b>REFERENCES .....</b>                       | <b>52</b> |

## List of figures

|   |    |
|---|----|
| Figure 3.1: Trend in the proportion of children under 5 years in South Africa.....  | 10 |
| Figure 3.2: Trend in the proportions of children under 5 years by sex.....  | 11 |
| Figure 3.3: Trend in the proportions of children under 5 years by province.....   | 11 |
| Figure 3.4: Percentage of households with access to safe drinking water in South Africa.....  | 12 |
| Figure 3.5: Percentage of households with access to safe drinking water by province.....  | 12 |
| Figure 3.6: Percentage points on access to safe drinking water: 2014 and 2018.....  | 13 |
| Figure 3.7: Percentage of households with access to improved sanitation in South Africa.....  | 14 |
| Figure 3.8: Percentage of households with access to improved sanitation by province.....  | 14 |
| Figure 3.9: Percentage points on access to improved sanitation: 2014 and 2018.....  | 15 |
| Figure 3.10: Percentage of children below 18 years in households experiencing poverty in South Africa.....                                    | 15 |
| Figure 3.11: Percentage of children below 18 years in households experiencing poverty by population group.....                                | 16 |
| Figure 3.12: Percentage of children below 18 years in households experiencing poverty by province.....  | 17 |
| Figure 3.13: Percentage of children below 18 years in households experiencing poverty: 2006 and 2015...                                       | 18 |
| Figure 3.14: Percentage of households with children below 18 years experiencing hunger in South Africa.....                                   | 19 |
| Figure 4.1: Percentage of children under 5 years born with low birth weight in South Africa.....  | 20 |
| Figure 4.2: Percentage of children under 5 years born with low birth weight by province.....  | 21 |
| Figure 4.3: Percentage change on children under 5 years born with low birth weight: 2014 and 2018.....  | 22 |
| Figure 4.4: Percentage of children who were exclusively breastfed and received hexavalent third dose in South Africa.....                     | 23 |
| Figure 4.5: Percentage of children under 5 years who were exclusively breastfed and received hexavalent third dose by province.....           | 24 |
| Figure 4.6: Percentage change of children under 5 years who were exclusively breastfed and received hexavalent third dose: 2014 and 2018..... | 25 |
| Figure 4.7: Proportion of children 12–23 months who have ever eaten liver, SADHS 2016.....  | 26 |
| Figure 4.8: Proportion of children under 5 years by types of anaemia, SADHS 2016.....   | 27 |
| Figure 4.9: Proportion of children under 5 years with severe acute malnutrition in South Africa.....  | 27 |
| Figure 4.10: Proportion of children under 5 years with severe acute malnutrition by province.....   | 28 |
| Figure 4.11: Percentage points of children with severe acute malnutrition: 2016 and 2018.....   | 28 |
| Figure 4.12: Percentage of children under 1 year who are vaccinated in South Africa.....  | 29 |
| Figure 4.13: Percentage of children under 1 year who are vaccinated by province.....  | 29 |
| Figure 4.14: Percentage points of children under 1 year who were vaccinated: 2014 and 2018.....   | 30 |
| Figure 5.1: Trend in the proportion of life expectancy at birth by sex in South Africa.....   | 31 |
| Figure 5.2: Percentages of stillbirths and neonates mortality in South Africa.....  | 32 |
| Figure 5.3: Infant and under 5 mortality rates in South Africa in South Africa.....   | 33 |



## List of tables

|  |    |
|--|----|
| Table 5.1: The top five leading natural causes of death among under 5 years in South Africa .....                                  | 34 |
| Table 5.2: The top five leading natural causes of death among male children under 5 years .....                                    | 35 |
| Table 5.3: The top five leading natural causes of death among female children under 5 years .....                                  | 36 |
| Table 5.4: The top five leading natural causes of death among children under 5 years from the black African population group ..... | 37 |
| Table 5.5: The top five leading natural causes of death among children under 5 years from the Indian/Asian population group .....  | 38 |
| Table 5.6: The top five leading natural causes of death among children under 5 years from the coloured population group .....      | 39 |
| Table 5.7: The top five leading natural causes of death among children under 5 years from the White population group .....         | 40 |
| Table 5.8: Top five leading natural causes of death among children under 5 years in Western Cape .....                             | 41 |
| Table 5.9: Top five leading natural causes of death among children under 5 years in Eastern Cape .....                             | 42 |
| Table 5.10: The top five leading natural causes of death among children under 5 years in Northern Cape ..                          | 43 |
| Table 5.11: The top five leading natural causes of death among children under 5 years in Free State .....                          | 44 |
| Table 5.12: The top five leading natural causes of death among children under 5 years in KwaZulu-Natal ..                          | 45 |
| Table 5.13: The top five leading natural causes of death among children under 5 years in North West .....                          | 46 |
| Table 5.14: The top five natural natural causes of death among children under 5 years in Gauteng .....                             | 47 |
| Table 5.15: The top five leading natural causes of death among children under 5 years in Mpumalanga .....                          | 48 |
| Table 5.16: The top five leading natural causes of death among children under 5 years in Limpopo 2014–2018 .....                   | 49 |

## Preface

Thematic health reports are part of a series of publications by Statistics South Africa (Stats SA) that are compiled on an annual basis. This health report highlights the health and wellbeing of children under 5 years in South Africa. It is based on a 5-year trend (2014-2018) information from various internal and external sources for the following selected health and socio-economic indicators: life expectancy at birth, poverty, hunger, low birth weight, breastfeeding (status), micronutrient intake, malnutrition, vaccination, stillbirths, neonatal and post-neonatal, infant and under 5 mortality.

Several internal sources (Mid-Year Population Estimates, the Living Conditions Survey and the General Household Survey), the South Africa Demographic and Health Survey, and external source (District Health Management Information System by the National Department of Health) were used to compile this report.

It is anticipated that information in this report will assist policy makers in dealing with issues that improve the well-being and health of children in South Africa.



**Risenga Maluleke**  
**Statistician-General**



## Acknowledgements

Appreciation is hereby awarded to the Health Statistics Team for the conceptualization, data request, compilation and finalisation of the report. Accolades go to Ms. Ramadimetja Matji, Mr. Nchimane Mahladisa, Ms. Seretloane Mabitsela and Ms. Segametsi Letlape.

Data used in this thematic report were sourced from the District Health Management Information System (DHMIS) managed by the National Department of Health (NDoH). This continuous support and assistance is highly appreciated.

Data from internal sources such as the Demographic Analysis, Poverty and Inequality Statistics and Social Statistics sections within Statistics South Africa are also appreciated.

## Abbreviations

|                 |  |
|-----------------|--|
| <b>BMI</b>      | Body Mass Index  |
| <b>DHMIS</b>    | District Health Management Information System                    |
| <b>EPI</b>      | Expanded Programme on Immunisation                               |
| <b>EBF</b>      | Exclusive breastfeeding  |
| <b>EDCAN</b>    | Early Childhood Development Action Network                       |
| <b>FAO</b>      | Food and Agriculture of the United Nations                       |
| <b>GHI</b>      | Global Hunger Index  |
| <b>HepB</b>     | Hepatitis B  |
| <b>HIV/AIDS</b> | Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome |
| <b>IFPRI</b>    | International Food Policy Research Institute                     |
| <b>IMR</b>      | Infant Mortality Rate  |
| <b>IRR</b>      | Institute of Race Relations                                      |
| <b>MACOD</b>    | Mortality and Causes of Death                                    |
| <b>MYPE</b>     | Mid-Year Population Estimates                                    |
| <b>NDoH</b>     | National Department of Health                                    |
| <b>NDoHA</b>    | National Department of Home Affairs                              |
| <b>NDP</b>      | National Development Plan  |
| <b>NIHCE</b>    | National Institute for Health and Care Excellence                |
| <b>MDGs</b>     | Millennium Development Goals                                     |
| <b>OECD</b>     | Organisation for Economic Co-operation and Development           |
| <b>PMNCH</b>    | Partnership for Maternal, New-born and Child Health              |
| <b>RMHCAH</b>   | Reproductive, Maternal, Newborn, Child and Adolescent Health     |
| <b>RDP</b>      | Reconstruction and Development Programme                         |
| <b>SAM</b>      | Severe Acute Malnutrition  |
| <b>SDGs</b>     | Sustainable Development Goals                                    |
| <b>SSA</b>      | Sub-Saharan Africa   |
| <b>Stats SA</b> | Statistics South Africa  |
| <b>U5M</b>      | Under-five mortality   |
| <b>UNICEF</b>   | United Nations Children's Fund                                   |
| <b>UNDP</b>     | United Nations Development Plan                                  |
| <b>UNWFP</b>    | United Nations World Food Programme                              |
| <b>WASH</b>     | Water, Sanitation and Hygiene                                    |
| <b>WBG</b>      | World Bank Group   |
| <b>WHO</b>      | World Health Organisation  |
| <b>WFP</b>      | World Food Programme   |

## Summary of findings

### Low birth weight: 2014 – 2018

The reader is sensitised on the birth weight statistics given that such relates to new borns at the time of birth. Even though there are fluctuations between 2014 and 2018 observable for some of the provinces as presented in Figure 4.1 (page 22), the overall percentage for the country was negligible, suggesting some positive improvement. Northern Cape remain the only province that reflected the highest increase in low birth weight for all the years, with a particular reference to 2016 but subsequently stabilized in 2018. Limpopo, Mpumalanga and Eastern Cape exhibit a slight increase in low birth weight.

### Breastfeeding exclusively and receiving hexavalent third dose: 2014 – 2018

Countrywide, the percentage of children who were exclusively breastfed and received hexavalent third dose showed an upward trend from 2015 to 2018. Trends by province between 2014 and 2018 show fluctuations. Provinces that improved in promoting exclusive breastfeeding between the years 2014 and 2018 include Gauteng, Western Cape, KwaZulu-Natal, and Eastern Cape.

### Percentage of children under one year who got vaccinated between 2014 and 2018

The proportion of children vaccinated countrywide was above 60% for almost all provinces. However, provinces such as Western Cape, Free State, North West and Limpopo have never reached the 90% target as outlined by the WHO over time.

Provincially, percentage point analysis for 2014 and 2018 shows an increase in children vaccinated for Mpumalanga followed by KwaZulu-Natal and lastly Eastern Cape.

### Severe acute malnutrition: 2016 – 2018

Northern Cape is the only province that exhibited high proportion of severe acute malnutrition for children under 5 years between 2016 and 2018.

## CHAPTER 1

### 1.1 Introduction

Thematic health reports are part of a series of publications by Statistics South Africa (Stats SA) which are compiled on an annual basis. This health report highlights the health and wellbeing of children under 5 years in South Africa. It is based on a 5-year trend (2014–2018) information from various internal and external sources for the following selected health and socio-economic indicators: life expectancy at birth, poverty, hunger, low birth weight, breastfeeding (status), micronutrient intake, malnutrition, vaccination, stillbirths, neonatal and post-neonatal, infant and under 5 mortality.

Children under 5 years are in a critical period in the development of human and social capital, decisive in preparing societies to be prosperous, sustainable, and inclusive in the future (OECD, 2019). On one hand, children's social and emotional wellbeing gives the building block for a healthy behaviour and good educational attainment. On the other hand, poor social and emotional wellbeing surges the likelihood of anti-social behaviour and problems related to mental health, teenage pregnancy, poor educational attainment, drug or alcohol misuse and involvement in criminal activity later in their future lives (National Institute for Health and Care Excellence, August 2016).

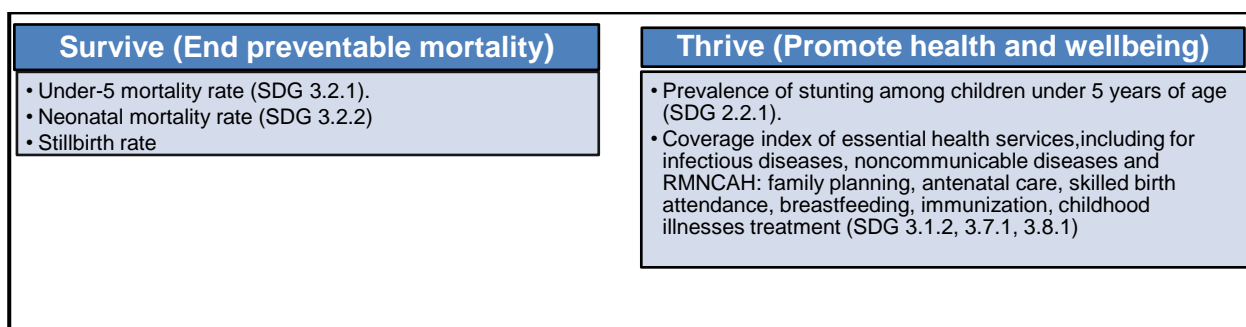
Investing in early childhood development is seen as the best way a country can boost shared prosperity, promote inclusive economic growth, expand equitable opportunity, and stop extreme poverty (World Health Organization, United Nations Children's Fund, World Bank Group, 2018).

A Nurturing Care Framework for helping children survive and thrive to transform health and human potential was developed by the World Health Organization (WHO) in collaboration with the United Nations Children's Fund (UNICEF), the World Bank Group (WBG), the Partnership for Maternal, New-born and Child Health (PMNCH) and the Early Childhood Development Action Network (ECDAN) in 2018 (World Health Organization, United Nations Children's Fund, World Bank Group, 2018).

**The survive, thrive and transform indicators** framework was created in response to strong evidence and growing recognition that the early years are critical for human development and it outlines guiding principles, strategic actions and ways of monitoring progress (World Health Organization, United Nations Children's Fund, World Bank Group, 2018).

The key indicators of the Global Strategy for Women's, Children's and Adolescents' Health (2016–2030) were classified as survival, thrive and transform group indicators. Classification of the key health indicators focussing on under 5 children is illustrated in the diagram below. The survival indicators relevant for this report and put in place are maternal mortality, under 5 mortality (U5M) rate, neonatal mortality rate and stillbirth rate.

Of the three key indicators relating to the above mentioned framework, only two pertain to this report, owing to data limitations. These include survive and thrive. Indicators applicable to this report include prevalence of stunting among children under 5 years of age and coverage of essential health services (including for infectious diseases, non-communicable diseases). In addition, reproductive, maternal, newborn, child alongside adolescent health (RMHCAH). Family planning, antenatal care, skilled birth attendance, breastfeeding, immunisation, childhood illnesses treatment.

**Diagram 1: Key health indicators classified as SURVIVE and THRIVE**

Source: GBDHealth, 2018

## 1.2 Objectives of the report

The purpose of this report is guided by the following objectives:

- 1. To highlight demographic information for children under 5 years covering selected variables**
- 2. To present social determinants of health in early childhood, covering:**
  - Access to water and sanitation
  - Poverty
  - Hunger
- 3. To highlight factors contributing to health outcomes through analyses of the following selected indicators:**
  - Low birth weight
  - Micronutrient intake
  - Malnutrition
  - Breastfeeding
  - Vaccination
- 4. To present information on deaths covering the following:**
  - Stillbirths
  - Early neonatal mortality
  - Infant mortality
  - Under 5 mortality
  - The five leading causes of death by sex, population group and province

## 1.3 Outline of the report

This report is divided into six chapters. The first chapter provides the introduction, objectives and sources of data used in this report. Chapter 2 highlights selected literature review to supplement and support results. Chapter 3 presents demographic profiles, access to safe drinking water, access to acceptable/improved sanitation, poverty and hunger for the selected study group. Chapter 4 provides data on low birth weight, breastfeeding, malnutrition and macronutrients intake; and vaccination. Chapter 5 presents information on life expectancy, mortality and causes of death. Chapter 6 provides concluding remarks.

## 1.4 Data sources

Statistics South Africa has a mandate to produce and coordinate official statistics for the country at large. This mandate is enforced through the Statistics Act, 1999 (Act No. 6 of 1999 as amended). Statistics produced are meant for the Government sector, research institutions, private sector and other non-governmental organisations in planning; decision-making or other actions; and monitoring or assessment of policies,. As a result, this report is based on the following internal and external sources of data for the purpose of providing related official statistics.

- Life expectancy at birth from the Demographic Analysis Division within Stats SA
- Population of children under 5 years in line with the annual midyear population estimates managed by the Demographic Analysis Division within Stats SA
- Access to water, sanitation and hunger from the General Household Survey (GHS) Division within Stats SA
- Poverty information linked to children under 18 years at the time of data collection from the Poverty Trends Report published by Stats SA
- Malnutrition, low birth weight, breastfeeding and vaccination from the District Health Management Information System (DHMIS) of the National Department of Health (NDoH)
- Micronutrients intake from the South Africa Demographic and Health Survey (SADHS)
- Deaths from the Mortality and Causes of Death (MACOD) data of Stats SA

## 1.5 Data limitations

It would have been ideal to produce the report using one representative data source containing all the health indicators. However, in the absence of such data source, multiple data sources, namely, DHMIS, General Household Survey (GHS), Living Conditions Survey (LCS), South Africa Demographic and Health Survey (SADHS), Mid-year population estimate (MYPE) report and Mortality and causes of death (MACOD) were used to compile the report.

District Health Management Information System (DHMIS) collects information on individuals who visited public healthcare facilities. Caution should be exercised by the user when interpreting or using the information for decision making. Analysis using the DHMIS data only focussing on national and provincial levels. SADHS 2016 data is the only recent DHS, therefore no trend analysis could be done using the SADHS data. Recent data for LCS and MACOD are for 2015 and 2017, respectively.

## CHAPTER 2

### 2.1 Access to water and sanitation

In Africa, children continue to lose lives, miss school, and suffer from diseases, malnutrition, and poverty. Proper toilets and hand washing, preferably with soap, prevents the transfer of bacteria, viruses and parasites found in human excreta, which leads to contamination of water resources and food. Contamination is a major cause of diarrhoea, the second biggest killer of children in developing countries (UNDESA, 2014).

In South Africa, about 11% of both formal and informal households must still be provided with sanitation services (these households have never had a government supported sanitation intervention). About 26% of households within formal areas have sanitation services which do not meet the required standards due to the deterioration of infrastructure caused by lack of technical capacity to ensure effective operation, timeous maintenance, and refurbishment and/or upgrading, pit emptying services and/or insufficient water resources (Presidency, 2014).

Literature shows that 85% of households have access to reconstruction and development plan (RDP) acceptable levels of water. However, 14,1% of households in Kwazulu-Natal have never had access to water. Above 70% of all households in South Africa have access to reconstruction and development plan (RDP) acceptable sanitation, but only 12,5% of households in the Eastern Cape do not have access to any sanitation (SAHRC, 2014).

### 2.2 Poverty

South Africa is committed to the United Nations' Convention of the Rights of the Child (CRC) as to improve the well-being of children. This convention is implementing the principle of a "first call for children" whereby the needs of children are of the highest priority throughout the government's planning. The African Charter on the Rights and Welfare of the African Child during 2000 also supports this commitment of putting the needs of children as a priority (Republic of South Africa, 2012).

In South Africa, 3 million of 21 million children live below the lower-bound poverty line, and children aged 0–17 years are among the hardest hit by poverty as compared to other age groups (Stats SA, 2017). Children aged 0-4 years in particular had the lowest multidimensional poverty rate at 60%. Multidimensional poor children suffer from 4 out of 7 deprivations, i.e. Housing, Protection, Nutrition, Health, Information, WASH (Drinking Water source, Sanitation and Waste disposal) and Education/Child development) across all age groups (StatsSA, 2020).

Child poverty is a challenge in South Africa, with more than half a million households with children under 5 years experiencing poverty in 2017 (StatsSA, 2019). Provincial distribution show that Northern Cape and KwaZulu-Natal have high proportions of households experiencing poverty. More than half of households with young children going hungry is observed in urban areas. A third of children in Early Childhood Development centres in Gauteng and Free State were stunted as a result of chronic malnutrition (StatsSA, 2019).

Child poverty is seen more among children living in rural areas (88,4%) and in non-metropolitan areas (73,7%) as compared to 41,3% of children residing in urban areas and 39,6% in metropolitan areas. Major contributors to the poverty situation of children aged 0 to 4 years are housing, drinking water source, sanitation and waste disposal (WASH), health and child development dimensions (StatsSA, 2020). Racial differences show that children from the black African population group (68,3%) are more likely to be in poverty as compared to other population groups. Children with no parents have higher multidimensional poverty rates compared to other children. In addition, children that are single orphans where only a mother is alive have higher poverty rates compared to single orphans where only a father is alive (StatsSA, 2020).



## 2.3 Hunger

Hunger refers to the distress associated with lack of food. The Food and Agriculture Organization of the United Nations (FAO) defines food deprivation, or undernourishment, as the consumption of fewer than about 1,800 kilocalories a day which is the minimum that most people require to live a healthy and productive life (IFPRI, 2014). Food and Agriculture Organisation (FAO) estimates of the number of undernourished people in SSA show an increase from 165,5 million in 1990-92 to 198.4 million in 1999-2001 (FAO, 2003). Although the proportion of undernourished people remained constant during this period, the increase in the absolute number reflects the fact that the supply of domestic or imported food is not sufficient to cope with population growth.

Almost 33% of the African population (200 million people) are malnourished, which regarded as the highest prevalence in the world. The number of malnourished Africans has almost doubled since the late 1960s, increasing roughly at the same rate as population growth. This is a fact that indicates lack of successful strategies in poverty alleviation and food security improvement. Annually, around 30 million Africans are affected by food crises which occur when shocks such as drought, floods, pests, economic downturns or conflicts harm the livelihoods of this chronically insecure population (Victoria Kenny S, 2019).

According to the International Food Policy Research Institute in 2014, South Africa was classified as one of the countries whose Global Hunger Index (GHI) was below 5%. In 1990 the Global Hunger Index (GHI) in South Africa was 7,5% and dropped to 6,4% in 1995. The GHI increased to 7,4% in 2000; 7,8% in 2007 and dropped in 2014 (IFPRI, 2014).

## 2.4 Malnutrition

Nutrition is a vital element to health and well-being, and a provider to human capital development. Measures of child undernutrition are used to track development progress. Estimates of child malnutrition assist in determining whether the world is on track to achieve Goal 2 of the SDGs; “End poverty, achieve food security and improve nutrition, and promote sustainable agriculture”.

Three important indicators used to measure malnutrition are stunting (low height for age), wasting (low weight for height), and underweight (low weight for age). The worldwide prevalence in the world was 15% for underweight, 25% for stunting, and 8% for wasting (UNICEF, 2014 and Mohammad Mohseni, March 2019).

South Africa is one of the top countries that have obesity issues among children under 5 years. There could be approximately 3,9 million overweight (BMI 25-29,9) and obesity (BMI > 30) in school children by 2025. This situation can lead to 120 000 children with impaired glucose tolerance (pre-diabetes) and 68 000 with overt diabetes. Child obesity continues to rise in South Africa. At least 13% of children, under the age of five, are obese (South African Child Gauge Report, 2019).

## 2.5 Micronutrient intake

Micronutrients, also called vitamins and minerals, are essential to development of people, their wellbeing and prevention of diseases. Micronutrients need to be derived from the food we eat as they are not produced in the body naturally (Centre for Disease Control, 2015). Deficiencies in Vitamin A, iodine and iron are known to be especially prevalent and are associated with a range of mild (often reversible) to severe (often irreversible) effects and the three micronutrient deficiencies have captured most of the world's attention in the last decade, namely, Vitamin A deficiency, iron deficiency anaemia and iodine deficiency disorders (IDD). Zinc deficiency has also recently come to the forefront. Poor and underprivileged children in developing countries are at particular risk of these nutritional deficiencies (Wenhold Friedeburg, 2008).

In September 2002, the NDoH set objectives for each of the focus areas of the Integrated Nutrition Programme (INP). One of the set objectives was to decrease malnutrition in children under the age of 5 years and they envisaged that the measurable target will be met by 2007 where the figures of underweight children will be 8%, stunting will be 18% and wasting will be 2% (Wenhold Friedeburg, 2008).

According to the South African Vitamin A Consultative Group (SAVACG) study that was conducted in South Africa in 1994, Limpopo (43,5%) and KwaZulu-Natal (38,9%) provinces had the highest prevalence of VAD whilst Western Cape (21,0%) and Northern Cape (18,5%) had the lowest prevalence of VAD. Those living in rural areas with poorly educated mothers were most affected (Wenhold Friedeburg, 2008).

## 2.6 Low birth weight

Birth weight is the first weight measured immediately after the baby is born, within the first hour of life. Low birth weight is a vital public health indicator (WHO, 2020) and it is defined as a birth weight of less than 2,5kg, irrespective of gestational age. This is the age of a pregnancy which is taken from the beginning of the woman's last menstrual period, or the corresponding age of the gestation (WHO, 2020).

There are several contributing factors to low birth weight, such as teenage pregnancy, the health status of the mother and high fertility, just to mention a few. Early child-bearing, particularly by teenagers and young women who have not completed school – has a significant impact on the educational outcomes of both the mother and child, and is also associated with poorer child health and nutritional outcomes (Hall & Nannan Nadine and Sambu, 2017).

A study conducted in South Africa between 2018 and 2019 showed that maternal body mass index, height, socio-economic status, and tobacco and alcohol use during pregnancy were associated with low birthweight of a child, Maternal tobacco use throughout pregnancy is related to low birth weight and preterm babies (Prakash M. Jeena, 2020).

## 2.7 Breastfeeding

Breastfeeding is an unmatched way of providing infants with the ideal food for the healthy growth and development (WHO, 2020). Exclusive breastfeeding (EBF) is a means of no other food or drink, no water, except breast milk (including milk expressed or from a wet nurse) for 6 months after birth. It reduces infant mortality due to common childhood illnesses such as diarrhoea or pneumonia and helps for a quicker recovery during illness (WHO, 2020). Breastfeeding is also vital to the health and well-being of mothers as it helps in the spacing of children, it reduces the risk of ovarian cancer and breast cancer, and is also a secure way of feeding and is safe for the environment (WHO, 2019).

South Africa has a history of low breastfeeding rates among women with and without Human Immunodeficiency Virus (HIV). While initial breastfeeding at birth is high, very few women practice exclusive breastfeeding for six months. In 2011, South Africa committed to promoting exclusive breastfeeding for six months for all mothers, regardless of their HIV status in line with the WHO recommendations. This was a marked shift from earlier policies, which led to average exclusive breast feeding (EBF) rates increasing from less than 10% in 2011 to 32% by 2016 (Sara Jewett Nieuwoudt, 2019).

A national facility-based evaluation conducted in 2010 showed that almost two-thirds of HIV exposed infants aged four to eight weeks were reported to have received infant formula and no breast milk. Since mother-to-child transmission can occur during pregnancy, birth or/ and even breastfeeding, they are advised according to the Prevention of Mother to Child Transmission (PMTCT) not to breastfeed their children, rather give them formula milk (Mnyani et al. International Breastfeeding Journal, 2017).

Information from healthcare facilities indicated a greater percentage (80,9%) of HIV negative women's intention to EBF, compared to 64,9% of HIV positive women. Being HIV negative was positively associated with a reported intention to breastfeed. Higher percentage on general knowledge of safe infant feeding practices were positively associated with reported EBF among postpartum women (Coceka N. Mnyani, 2017).

## 2.8 Vaccination

Vaccination is the administration of a vaccines in assistance of the immune system to develop protection against diseases. It is one of the most effective ways to prevent diseases. Vaccines comprise a spectrum of microorganism or virus in a weakened, live or killed state, or proteins or toxins from the organism. They are administered to help the body's immune system to recognize and fight pathogens like viruses or bacteria. Vaccines protect the body against diseases such as measles, polio, tetanus, diphtheria, meningitis, influenza, tetanus, typhoid and cervical cancer. Childhood immunization is the initiation of immunity through application of vaccine (WHO, 2008).

Nationally, coverage of immunisation for children aged 24 months was at least 90% for  $\geq 3$  doses of poliovirus vaccine,  $\geq 1$  dose of measles, mumps, and rubella vaccine (MMR),  $\geq 3$  doses of hepatitis B vaccine (HepB), and  $\geq 1$  dose of varicella vaccine. Children were least likely to be up-to-date by age 24 months with  $\geq 2$  doses of influenza vaccine (56,6%), with 1,3% of children born in 2015 and 2016 having not received no vaccinations by their second birthday. Coverage was lower for uninsured children and for children insured by Medical aid than for those with private health insurance (Holly A, 2019). About 60% (61%) of children received basic vaccination in South Africa (SADHS, 2016).

## 2.9 Life expectancy

Life expectancy at birth is defined as the average number of years that born babies would have lived if mortality level at each age remain constant (Cheung, 2018).

In South Africa, life expectancy at birth declined for both sexes, males (53,7% to 52,3%) and females (58,0% to 56,6%) between 2002 and 2006, largely due to the impact of the HIV and AIDS epidemic experienced, but expansion of health programmes to prevent mother-to-child transmission (PMTCT) as well as access to antiretroviral treatment (ARV) has partly led to the increase in life expectancy since 2007 (StatisticsSouthAfrica, 2019). Wide inequalities persist in South Africa's social determinants of health, as can be expected (Haal, Smith, & van Doorsaler, 2018).

South Africa adopted the NDP which envisions a life expectancy of at least 70 years by the 2030, with a largely Human Immunodeficiency Virus (HIV)-free population below 20 years, 28% reduction in non-communicable diseases, and combating the tuberculosis and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) epidemics by 2030 (Stats SA, 2018). Actions outlined in the NDP to improve the life expectancy was to promote healthy eating lifestyle, preventing and controlling epidemic burdens through deterring and treating HIV/AIDS, new epidemics and alcohol abuse; improving the quality of care, operational efficiency, health worker morale and leadership and innovation (NDC, 2015).

## 2.10 Mortality

This section covers information on stillbirths, neonatal, post-neonatal, infant and under 5 mortality. Mortality, particularly at younger ages, is vital for population health. Increased longevity with a better health and well-being has been one of the greatest human achievements of all times. A major contributor to the increase in longevity has been the decline of child mortality (UN, 2013). Information on infant and child mortality is relevant to a demographic assessment of a country's population and is an important indicator of the country's socioeconomic development and quality of life. It can also help identify children who may be at higher risk of death and lead to strategies to reduce this risk, such as promoting birth spacing.

In the case of South Africa, causes of stillbirths and early neonatal deaths are closely linked. The perinatal mortality rate encompasses both stillbirths and early neonatal deaths and offers some reflection of the level of mortality and quality of service around the time of delivery (SADHS, 2016). In South Africa, the proportion of stillbirths was 65,7% and neonatal deaths was 34,2% in 2014. KwaZulu-Natal and Gauteng provinces had the highest proportion of stillbirths (24,5% and 23,2% respectively); whilst Northern Cape had the lowest percentage of still births ( 2,7%). For early neonatal deaths, Gauteng and KwaZulu-Natal provinces had the highest percentages of 26,7% and 20,5% respectively and Northern Cape had the lowest percentage of 3,7% in 2014 (Statistics, 2016).

## 2.11 Stillbirths

The WHO defines stillbirth as a baby born dead at or after 28 weeks of gestation, or with a birthweight of  $\geq 1$  000g, or a body length of  $\geq 3,5$ cm. A stillbirth is also an infant born weighing 500g and/or more or at a gestational age of 24 weeks who shows no signs of life. Several risk factors have been associated with an increased risk of stillbirth: including maternal medical factors, maternal characteristics, foetal factors, sociodemographic factors and behavioural factors (Tamara Escañuela Sánchez, 2019). In South Africa the stillbirth rate for infants of 1 000g or more is 14/1 000 live births. South Africa had 16,4 stillbirths for every 1 000 births in 2019 (WHO, 2020).

## 2.12 Early neonatal mortality

Neonatal mortality are subdivided into early neonatal deaths (during the first seven days of life), and late neonatal deaths (after the seventh day but before the 28 completed days of life). The first 28 days of life (the neonatal period) represent the most vulnerable time for a child's survival. Neonatal deaths account for a large proportion of child deaths (UNICEF, 2019).

Sub Saharan Africa has one of the highest levels of perinatal mortality globally. This notwithstanding, there are sub-regional and country-specific disparities within such distribution. Contributions of neonatal deaths to under-five deaths is still relatively low in SSA (36%). However, SSA remains the region with the highest U5M rates (WHO, 2019). In addition, this region had the highest neonatal mortality rate in 2018 at 28 deaths per 1 000 live births.

The recent neonatal mortality rate in South Africa of 21 per 1 000 live births reported by the SADHS 2016 is of major concern. If South Africa is to meet the SDG target, special attention should be given to the availability of high-impact interventions, providing an adequate number of appropriately trained healthcare providers and a more active role played by ward-based community health workers and district clinical specialist teams (N. Rhoda, South African Medical Journal 2018).

## 2.13 Infant mortality

Infant mortality rate (IMR) is the probability of a child born in a specific year or period dying before reaching their first birthday, if subject to age-specific mortality rates of that period. Infant mortality rate (IMR) is generally regarded a vital national indicator of health because it is particularly sensitive to general structural factors, like socio-economic development and basic living conditions.

South Africa's IMR is at its lowest in almost two decades, having fallen by 32% between 2002 and 2017 (2018 South Africa Survey published by the Institute of Race Relations (IRR). In 2018, IMR for South Africa was 26,5 deaths per thousand live births. IMR of South Africa fell gradually from 99,3 deaths per thousand live births in 1969 to 26,5 deaths per thousand live births in 2018 (Knoema, 2018).

A comparison among provinces showed that Limpopo had the highest U5M rates of 110 per 1 000 deaths with IMR contributing 55% to the U5M rate (MDG Country Report 2010). Also, in South Africa, studies exist identifying the factors associated with infant mortality, but none has done so from a provincial perspective, using the Census 2011 data (Priscilla Bartus, 2017).

## 2.14 Under-5 years mortality rate

South Africa is committed to reducing U5M rates in line with the SDG targets 3.2: "By 2030, end preventable deaths of newborns and children under-5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1 000 live births and U5M to at least as low as 25 per 1 000 live births". Policymakers and healthcare service managers require accurate and complete data on the number and causes of child deaths to plan and monitor healthcare service delivery and health outcomes.

A National Perinatal Morbidity and Mortality committee was established in March 2008. The committee was tasked to audit all perinatal and neonatal deaths occurring in the country and produce annual reports using data sources such as the DHMIS and Vital registration information collected by the National Department of Home Affairs (NDoHA) which will later send the collected information to Stats SA for analyses. The U5M rate declined from 79,0 child deaths per 1 000 live births to 28,5 child deaths per 1 000 live births between 2002 and 2019 (Stats SA, 2019).

## CHAPTER 3

This chapter presents results of selected indicators for children under 5 years at the time of an individual study year in South Africa. A trend analysis is followed on all graphs and tables except in sections where there was no data for 2014 to 2018. *Unless otherwise communicated, all tables and figures reflect households that confirmed on availability of children aged under 5 years as part of the households enumerated.*

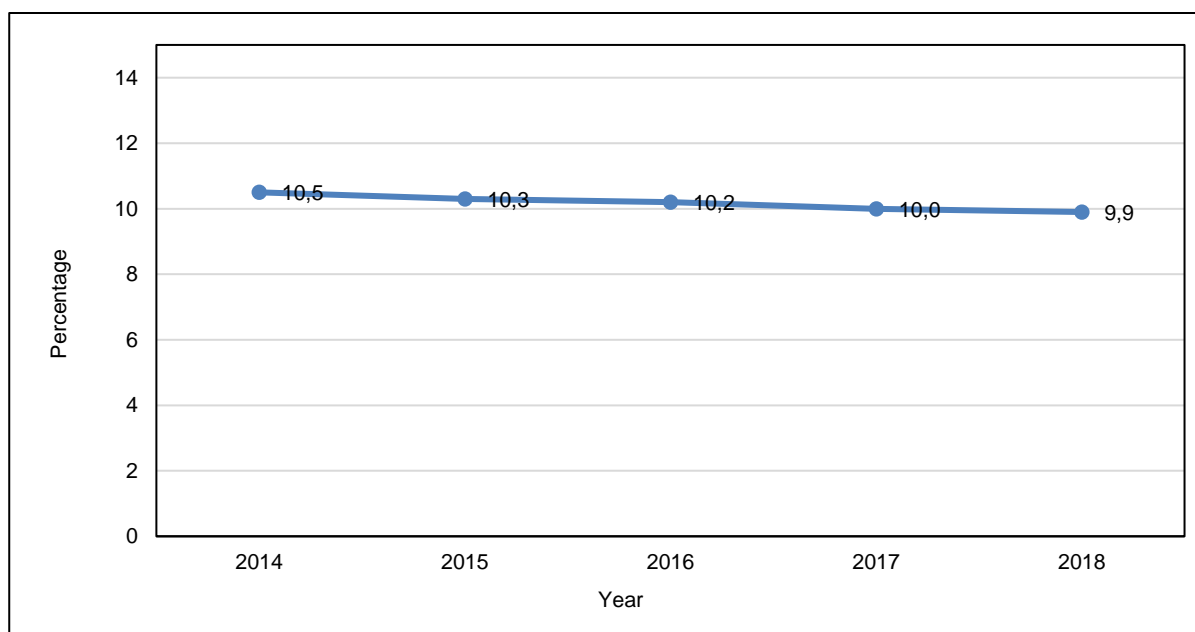
Data analysis procedure followed include percentage of children aged under 5 years by year of occurrence followed by percentage points between 2014 and 2018. The chapter covers demographic characteristics, access to water and sanitation, poverty, hunger, life expectancy at birth, low birth weight, breastfeeding, micronutrient intake and malnutrition, , vaccination and then mortality rate in line with the particular year.

### 3.1 Demographic characteristics

This section highlights results on the demographic information of children under 5 years for the years 2014–2018. Information was retrieved from the Mid-Year Population Estimates (MYPE) published annually by Stats SA. According to the results, the country has reached a stage in its demographic transition where birth rates are decreasing annually. The implication of this structure means less provision of health services for children (e.g, vaccination) and less children in nutrition feeding schools.

Figure 3.1 shows that almost 10% of the South African population was made up by children under 5 years between 2014 and 2018. The proportion of children under 5 years has been consistently decreasing by year (10,5% in 2014 to 9,9% in 2018).

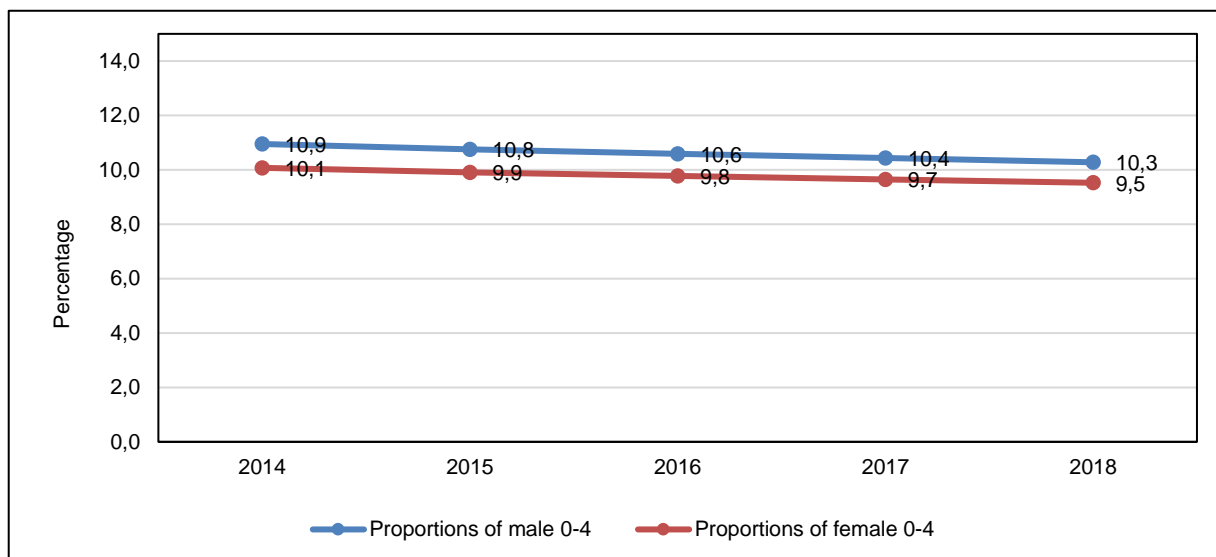
**Figure 3.1: Trend in the proportion of children under 5 years in South Africa**



Source: Mid-Year Population Estimates, 2014–2018

Figure 3.2 presents the proportion of children under 5 years by sex from 2014 to 2018. There was a slight decline in the proportions among children under 5 years for both males and females. Over the five-year period, the proportion of male children to the male population had always been above 10%. Meanwhile, the proportion of female children to the female population had always been approximately 10% for the same period.

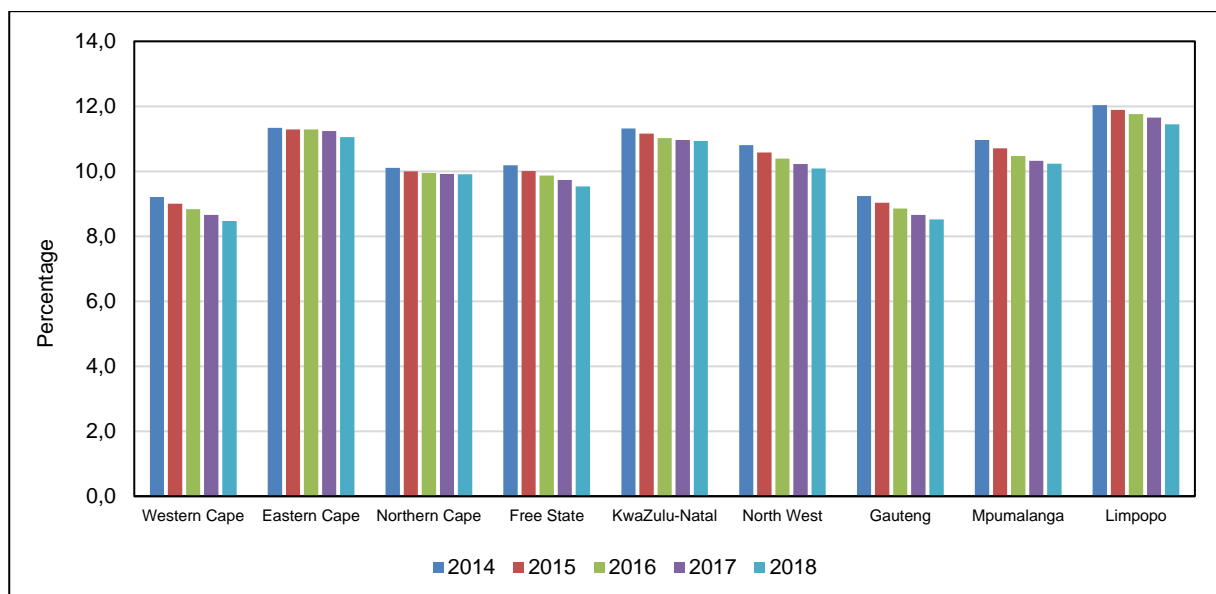
**Figure 3.2: Trend in the proportions of children under 5 years by sex**



Source: Mid-Year Population Estimates, 2014-2018

Figure 3.3 shows the proportion of children under 5 years by province from 2014 to 2018. In general, a steady decline is observed in all provinces. Comparatively, Limpopo had the highest proportion of children under 5 years while both Gauteng and Western Cape reflects lowest proportions of children under 5 over the period of five years.

**Figure 3.3: Trend in the proportions of children under 5 years by province**



Source: Mid-Year Population Estimates, 2014-2018

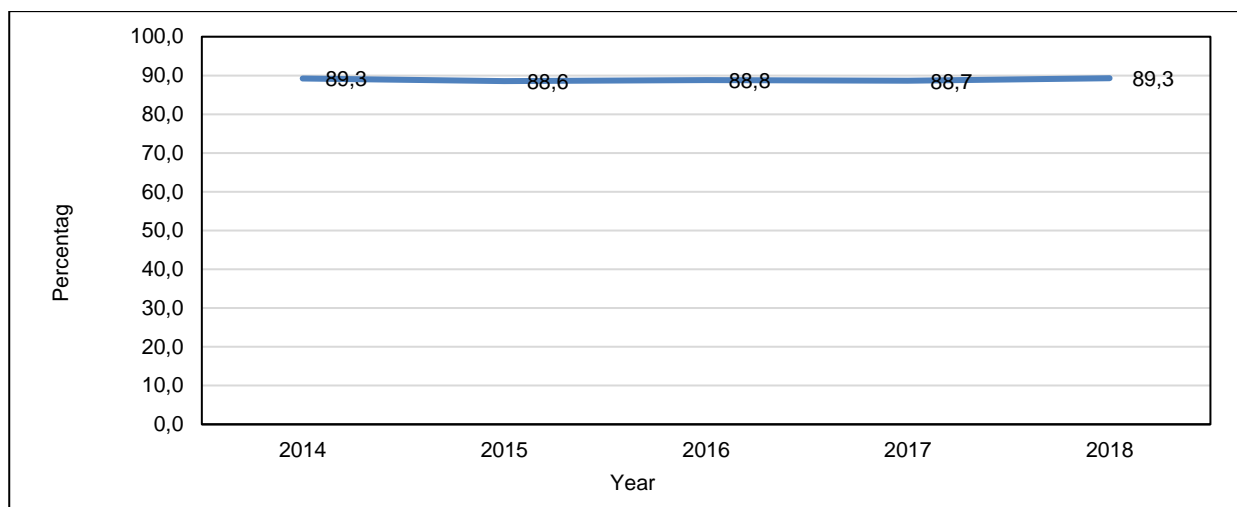


### 3.2 Access to water

Safe/improved drinking water is defined as piped (tap) water in dwelling/house/piped (tap) water in yard/borehole in yard/neighbour's tap/public/communal tap/borehole outside yard.

Figure 3.4 presents results of households with children under 5 years that reported to have had access to safe drinking water in South Africa. Nationally, there were fluctuations in the percentage of households with safe drinking water between 2014 and 2018. The highest percentage of 89,3% was reported in 2014 and 2018, meanwhile the lowest percentage was reported in 2015 at 88,6%. These results do not show any improvement in the percentage of households with access to safe drinking water within the reporting years.

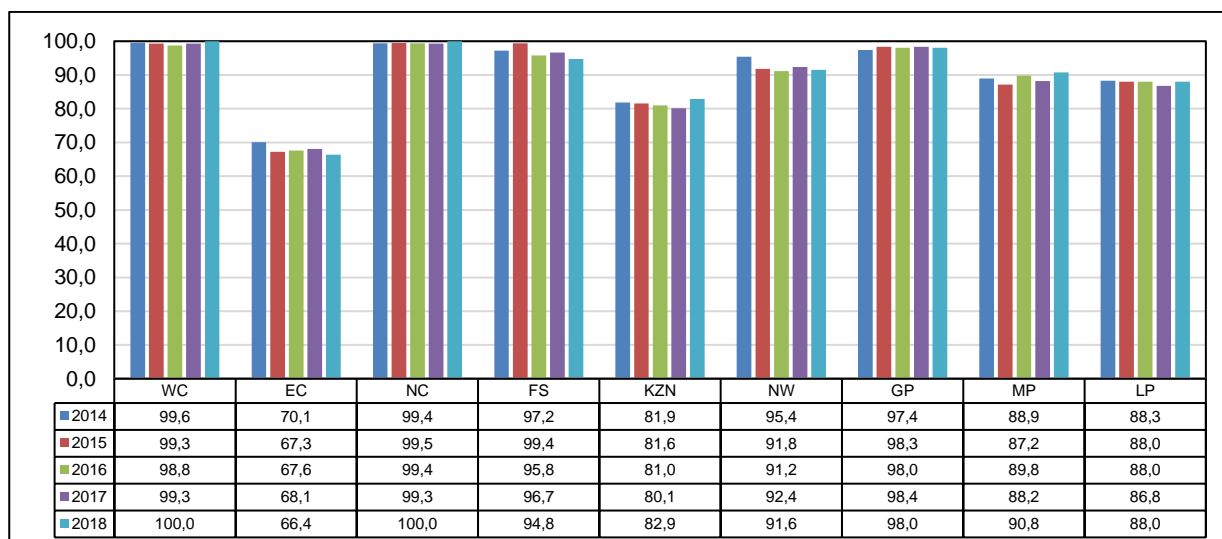
**Figure 3.4: Percentage of households with access to safe drinking water in South Africa**



Source: General Household Survey, 2014-2018

Figure 3.5 outlines the percentage of households with children under 5 years with access to safe drinking water in South Africa by province from 2014 to 2018. Eastern Cape is the only province that recorded percentages below 80% for all the years recorded. This notwithstanding, Western Cape, Northern Cape, Gauteng and Limpopo reflected some stagnation patterns. On the other side the remaining provinces show fluctuation.

**Figure 3.5: Percentage of households with access to safe drinking water by province**

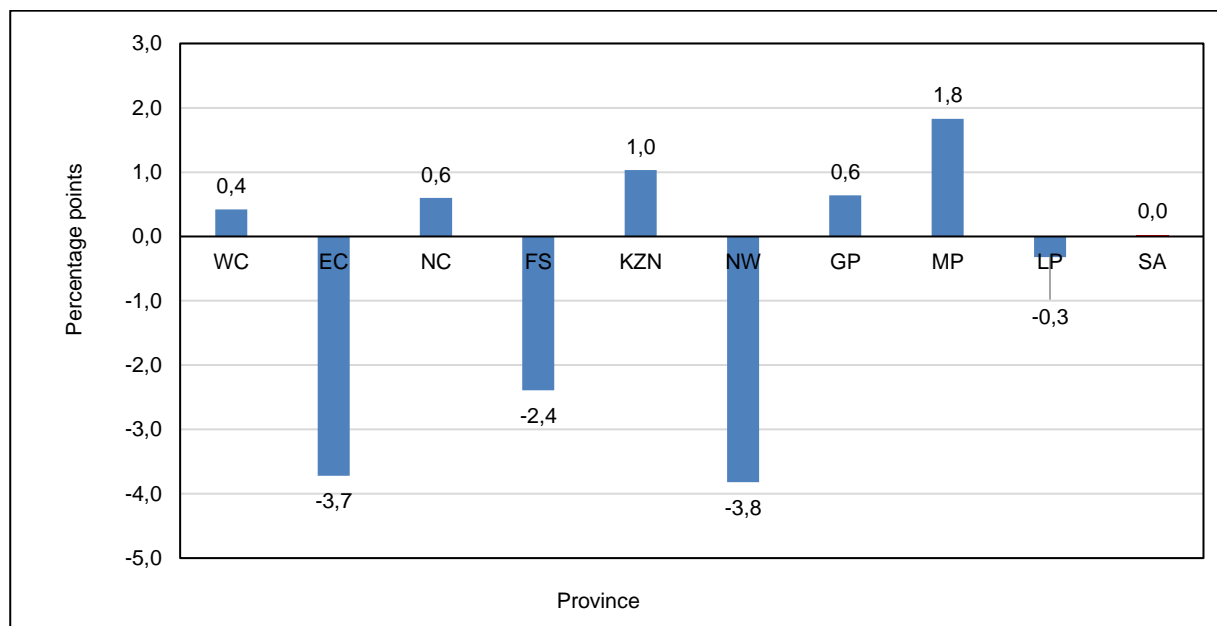


Source: General Household Survey, 2014-2018

Figure 3.6 outlines the percentage points for households with under 5 years that reported to have had access to safe drinking water in South Africa by province between 2014 and 2018. The percentage of households with access to safe drinking water was the same in 2014 and 2018.

Five provinces, namely; Mpumalanga, KwaZulu-Natal, Northern Cape, Gauteng and Western Cape recorded an increase of households with children under 5 years with access to safe drinking water. Mpumalanga province recorded the largest increase (up by 1,8 percentage points), followed by KwaZulu-Natal (up by 1,0 percentage point). The largest decrease was recorded in North West (down by 3,8 percentage points), followed by Eastern Cape (down by 3,7 percentage points), Free State (down by 2,4 percentage points) and Limpopo (down by 0,3 percentage points).

**Figure 3.6: Percentage points on access to safe drinking water: 2014 and 2018**



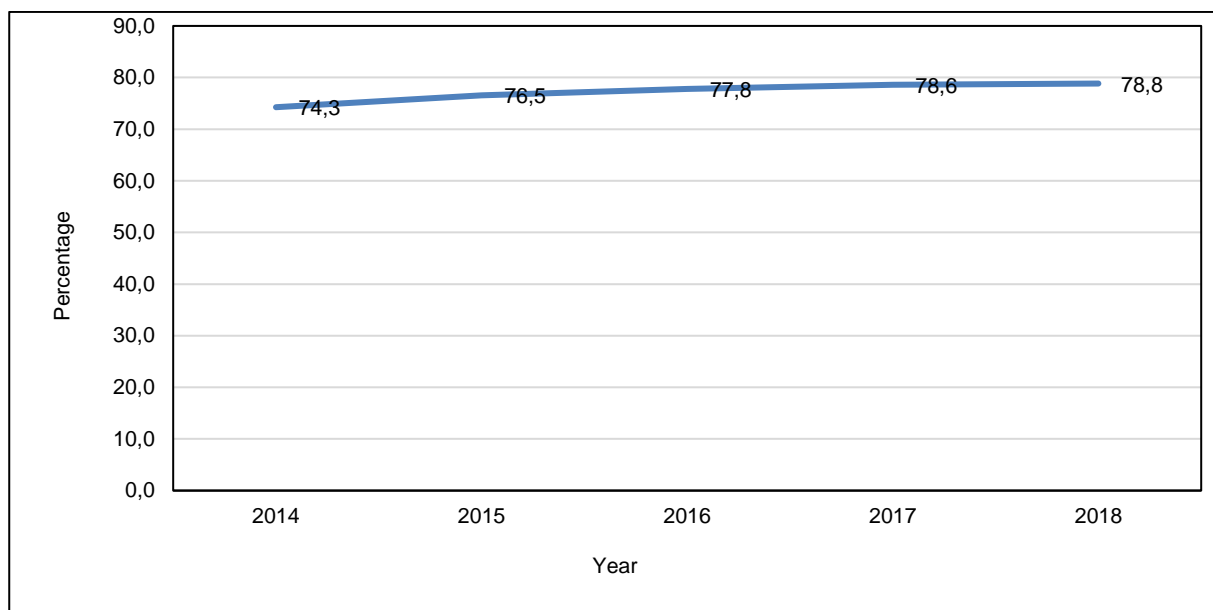
Source: General Household Survey, 2014–2018

### 3.3 Access to acceptable or improved sanitation

Acceptable/improved sanitation is defined as access to flush toilet connected to a public sewerage system/flush toilet connected to a septic tank or conservancy tank/pour flush toilet connected to a septic tank (or seepage pit)/pit latrine/toilet with ventilation pipe.

Figure 3.7 highlights a steep increase in households with children under 5 years that reported having improved sanitation between 2014 and 2015 (from 74,3% to 76,5%). A steady increase then followed thereafter between 2015 and 2018 (76,5% to 78,8%).

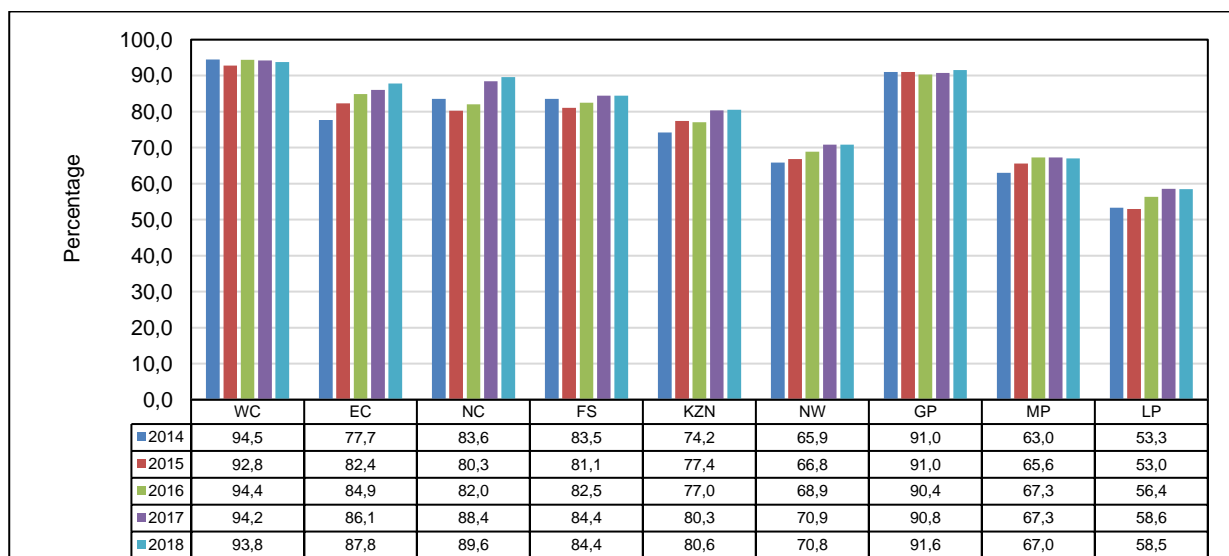
**Figure 3.7: Percentage of households with access to improved sanitation in South Africa**



Source: General Household Survey, 2014-2018

According to Figure 3.8, Northern Cape, Eastern Cape, Free State, North West, Limpopo reported an increase from 2015 to 2018. Although Limpopo shows an increase over the years, it has never reported above 60%. Western Cape and Gauteng presented a stagnant trend over the same period.

**Figure 3.8: Percentage of households with access to improved sanitation by province**

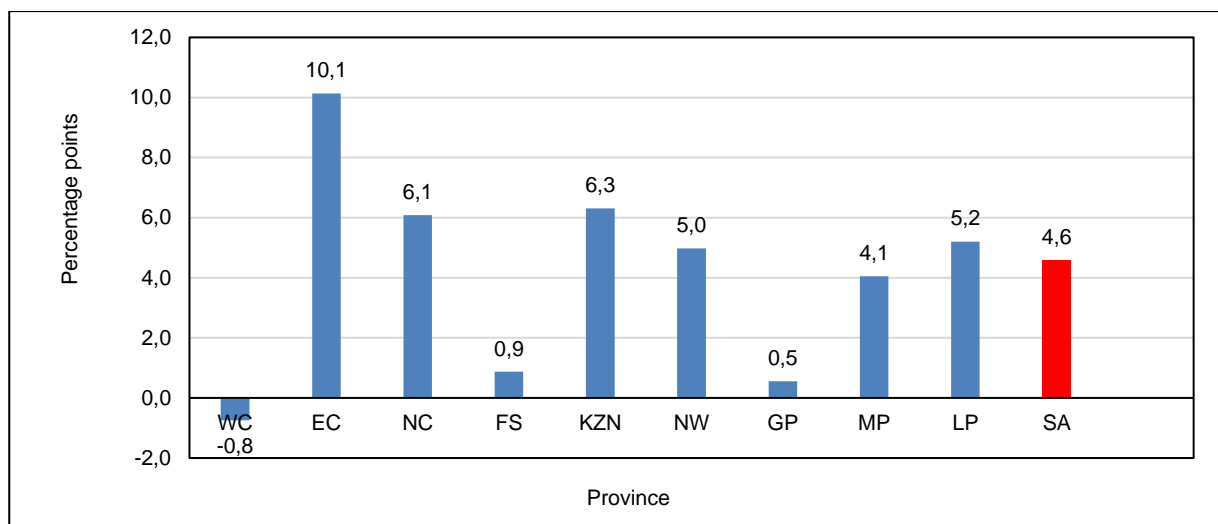


Source: General Household Survey, 2014-2018

Figure 3.9 outlines the percentage points of households with children under 5 years that reported to have had access to improved sanitation by province from 2014 to 2018. Access to improved sanitation of households with children under 5 years went up by 4,6 percentage points to 78,8% in 2018 as compared to 74,3% in 2014.

Households with improved sanitation increased in eight out of the nine provinces, with the largest increases recorded in Eastern Cape (up by 10,1 percentage points), followed by KwaZulu-Natal (up by 6,3 percentage points) and Northern Cape (up by 6,1 percentage points). Meanwhile, households with improved sanitation decreased in Western Cape by 0,8 percentage points, during the same period.

**Figure 3.9: Percentage points on access to improved sanitation: 2014 and 2018**

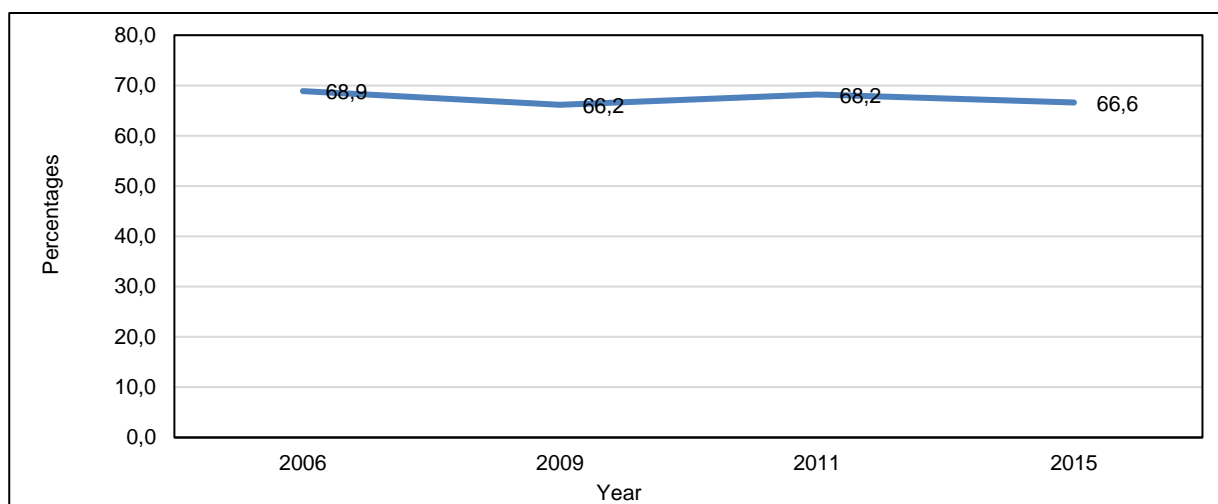


Source: General Household Survey, 2014–2018

### 3.4 Poverty

Poverty can be defined in many ways; monetary, material deprivation, etc. For the purpose of this report, all households with an income below the national income median are defined as poor. Figure 3.10 highlights the percentage of children under 18 years in South Africa who ever experienced poverty for 2006 to 2015. Nationally, household experiencing poverty fluctuated between 68,9% and 66,6%; with 2009 recording the lowest at 66,2%.

**Figure 3.10: Percentage of children below 18 years in households experiencing poverty in South Africa**



Source: Poverty trends report, Stats SA, 2017

Figure 3.11 presents the percentage of children below 18 years living in households with income that is below the median of the national household income by population group for 2006 and 2015. The black African population group had more children living in households with an income below the median of the national household income than other population groups for the for years indicated, followed by those from the coloured population group. Children from the Indian/Asian population group experienced poverty the least as compared to blacks and coloureds. The white population group had the least number of children living in households with an income below the national household median; recording single digits for all the years with an exception 2009 (11,8%).

Among the black African population group, poverty fluctuated between the years, where it shows a slight decrease from 76,3% in 2006 to 73,2% in 2015. The same fluctuating trend is seen among the coloured population group (47,8% to 43,6%). In the Indian/Asian population group there was a decrease for the 3 recorded years (30,4% in 2006 to 16,3% in 2011) and then an increase thereafter to 20,1% in 2015.

**Figure 3.11: Percentage of children below 18 years in households experiencing poverty by population group**

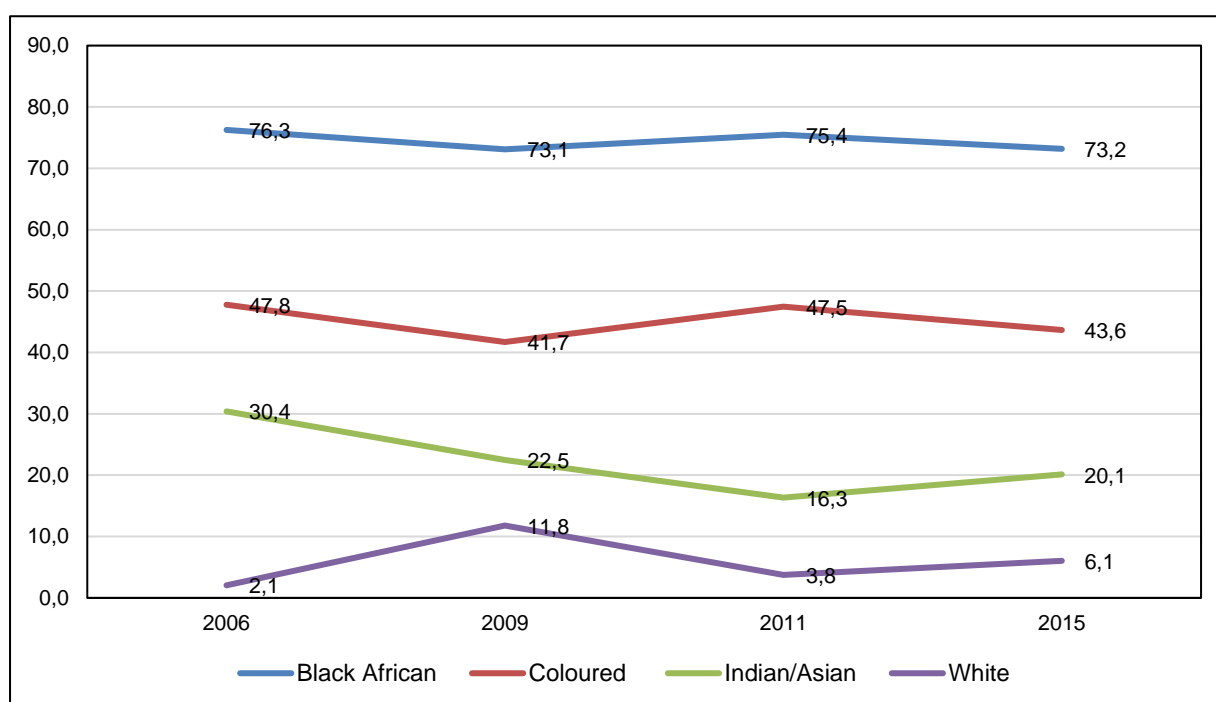


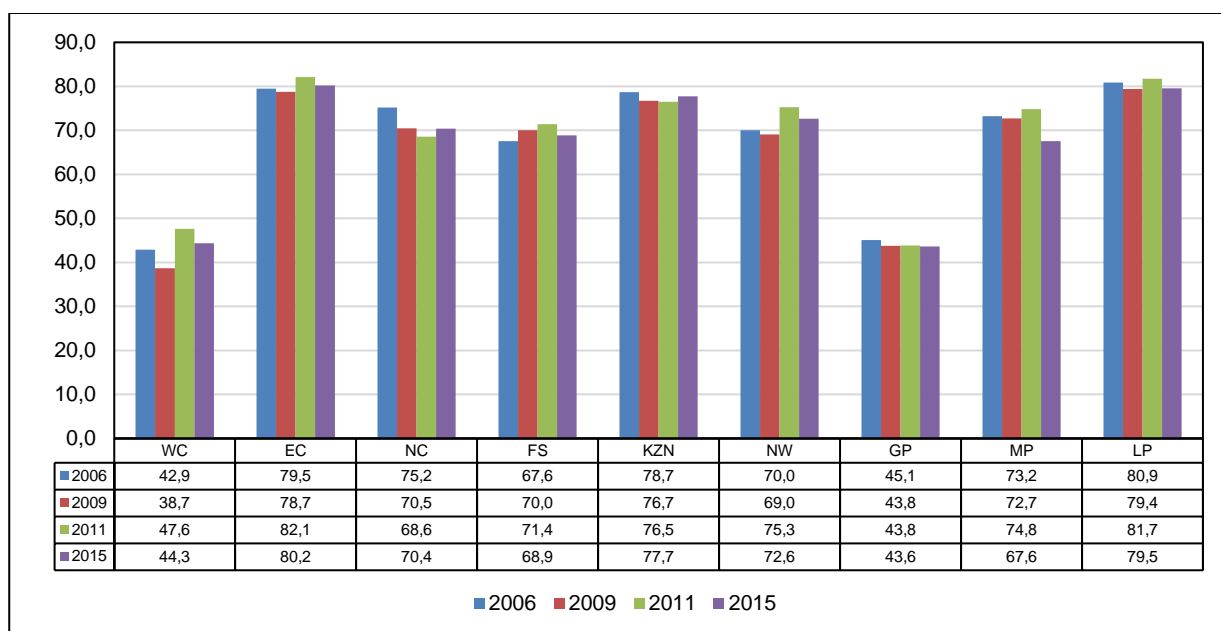
Figure 3.12 highlights the percentage of children under 18 years in South Africa who responded to have ever experienced poverty by province in 2006 and 2015. The least affected provinces in terms of poverty are Western Cape and Gauteng, as can be expected.

The worst affected provinces included Limpopo, followed by Eastern Cape until 2011, where there was an exchange between the two provinces where Eastern Cape was the leading worst affected province. The third worst affected province was KwaZulu-Natal, followed by Mpumalanga.

When it comes to the trend, Limpopo had a slight increase in 2011 before it declined in 2015, which was the same trend followed by Eastern Cape, Mpumalanga, North West and Free State.

Northern Cape highlighted a decrease from 2006 until 2011 and then a rise in 2015, whereas KwaZulu-Natal followed a different trend of a steady flat curve, which is the same curve followed by Gauteng. Western Cape had a sharp decrease in 2009, an increase in 2011, then another sharp decrease in 2015.

**Figure 3.12: Percentage of children below 18 years in households experiencing poverty by province**



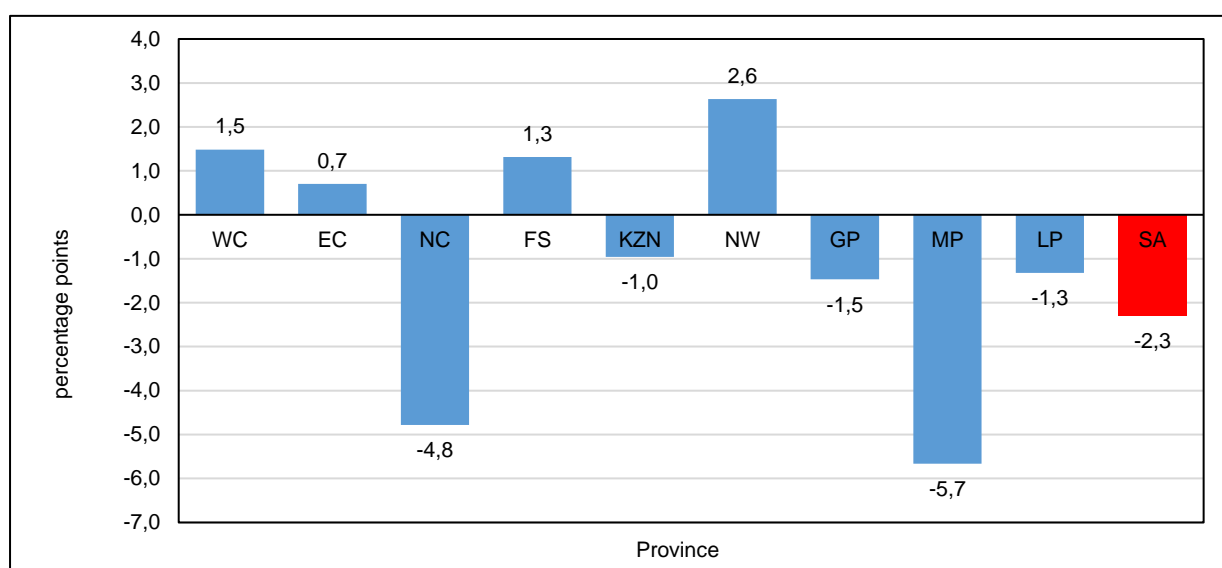
Source: Poverty trends report, Stats SA, 2017

Figure 3.13 highlights percentage points for households with children below 18 years between 2006 and 2015. Households that experienced poverty decreased by 2,3 percentage points to 66,6% in 2015 as compared to 68,3% in 2006.

A decline in households having children under 18 years that experienced poverty was observed in five provinces (Northern Cape, KwaZulu-Natal, Gauteng, Mpumalanga and Limpopo), with the largest decrease recorded in Mpumalanga (down by 5,7 percentage points) and Northern Cape (down by 4,8 percentage points). KwaZulu-Natal recorded the least decrease of 1,0 percentage points.

The remaining provinces (Western Cape, Eastern Cape, Free State and North West) recorded an increase in households having children under 18 years that experienced poverty. North West had the highest increase of 2,6 percentage points, followed by Western Cape (up by 1,5 percentage points). The lowest increase was recorded in Eastern Cape (up by 0,7 percentage points).

**Figure 3.13: Percentage of children below 18 years in households experiencing poverty: 2006 and 2015**



Source: Poverty trends report, Stats SA, 2017

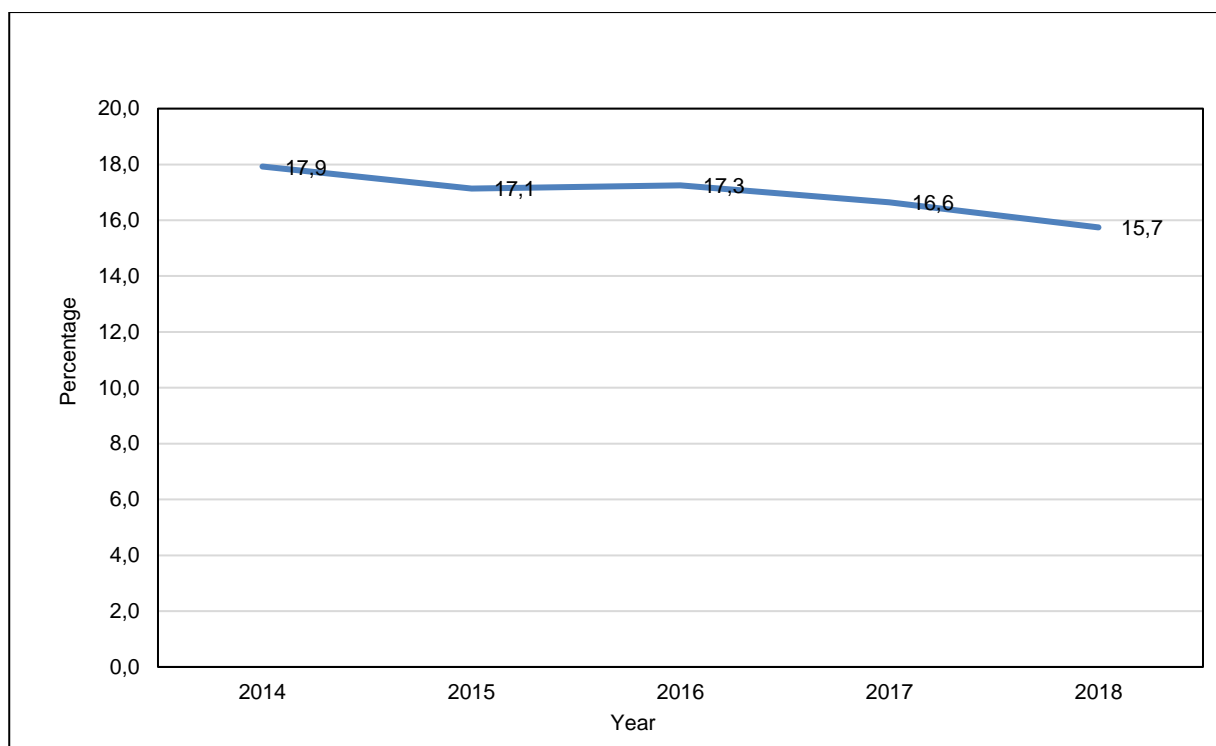


### 3.5 Hunger

Information on hunger was adapted from the General Household Survey that is conducted annually by Stats SA. This question is asked at a household level. Households with no children were excluded from the analysis. Figure 3.14 outlines the proportion of households having at least one child below the age of 18 years who went hungry at least once in the past 12 months prior the surveys for the years 2014 to 2018.

According to the results, there has been a decrease in the number of households having children below 18 years who went hungry at least once in the past 12 months from 2014 (17,9%) to 2015 (17,1%), then a slight increase in 2016, and a further decrease to 15,7% in 2018.

**Figure 3.14: Percentage of households with children below 18 years experiencing hunger in South Africa**



The General Household Survey, 2014–2018

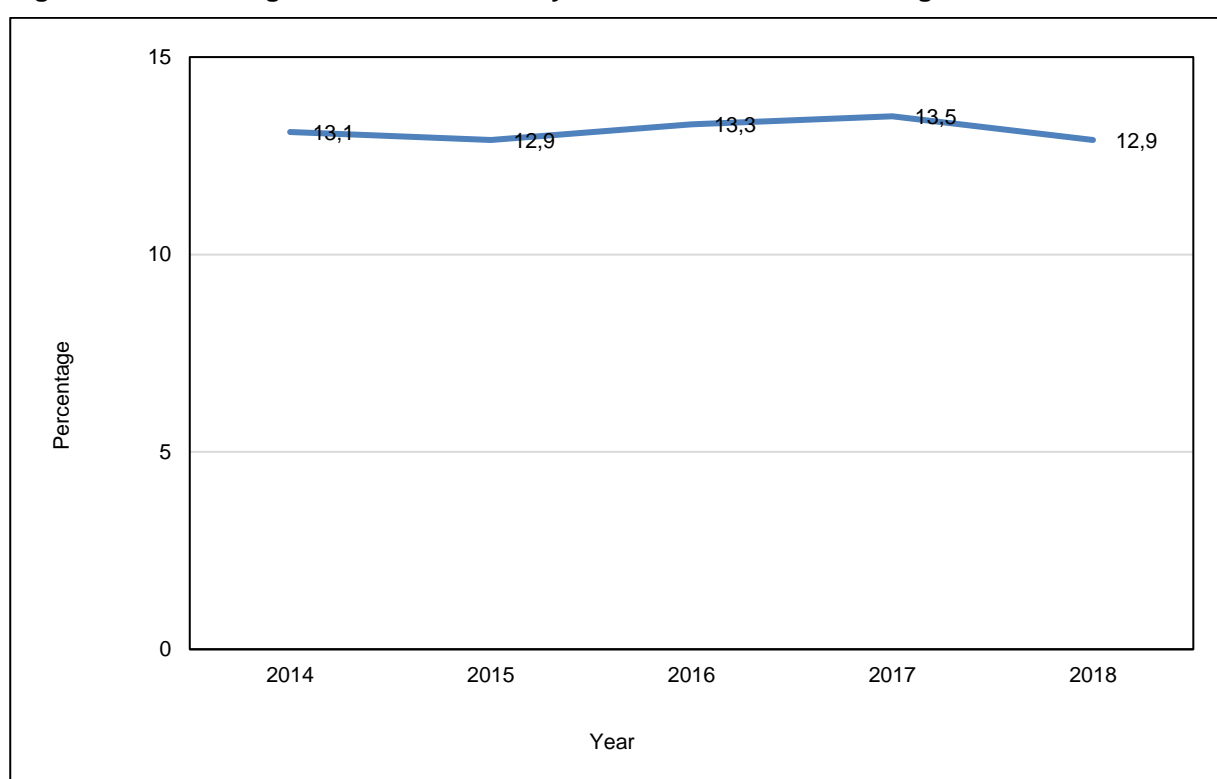
## CHAPTER 4

### 4.1 Low birth weight

Low birth weight is defined as a weight at birth that is less than 2 500g ( 2,5kg). The proportions were calculated by getting the sum of live births weighing less than 2 500g in a facility divided by total sum of live births in a facility. Caution is exercised in interpreting these results as new-borns below the weight of 500g were excluded from the calculations.

Figure 4.1 highlights the percentage of children under 5 years with low birth weight in South Africa between 2014 and 2018. Nationally, there was a decrease in the percentage of children with low birth weight between the years 2014 and 2015 (13,1% to 12,9%). Afterwards, there was a steady increase from 12,9% in 2015 to 13,5% in 2017, then a sharp decrease to 12,9% in 2018.

**Figure 4.1: Percentage of children under 5 years born with low birth weight in South Africa**

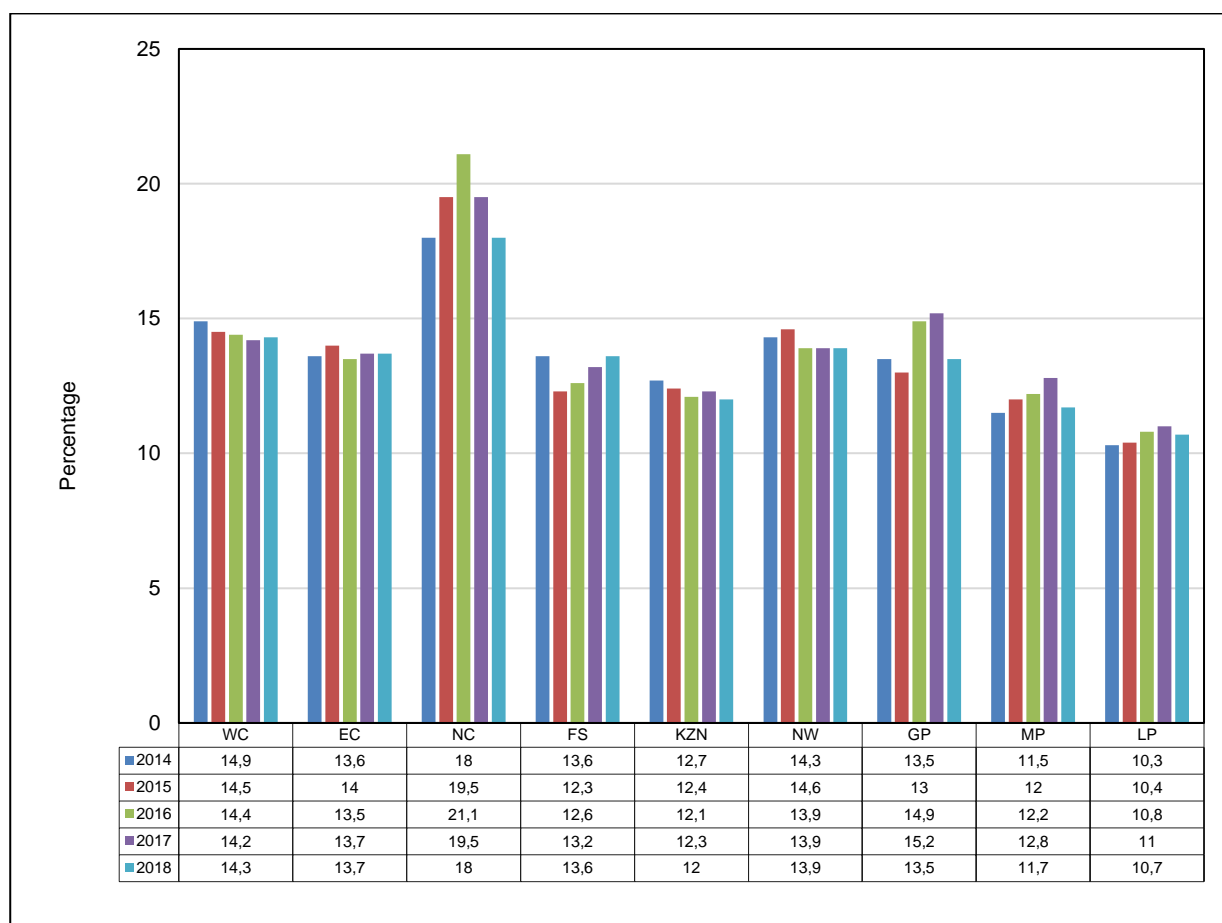


Source: National Department of Health, 2014–2018

Figure 4.2 presents the proportion of live births born weighing less than 2 500 grams between 2014 and 2018. Northern Cape had the highest proportion of live births born weighing less than 2 500 grams within the reporting years. Northern Cape recorded the highest percentages of children with low birth weight for all the years, constantly reporting figures above 18%. Limpopo had the lowest proportion of live births born weighing less than 2 500 grams as compared to all other provinces.

The proportion of live births born weighing less than 2 500 grams over the period of 5 years have been decreasing with the increasing years for two provinces, namely Western Cape (14,9% to 13,9%) and North West (14,3% to 13,6%). Other provinces such as Northern Cape, Gauteng, Mpumalanga, KwaZulu-Natal and Limpopo have experienced variations with regard to their proportions. Provinces that have experienced an increase on the proportions of live births born weighing less than 2 500 grams in 2019 over the period of 5 years are Eastern Cape (13,6% to 14%) and Free State (13,6% to 13,9%).

**Figure 4.2: Percentage of children under 5 years born with low birth weight by province**

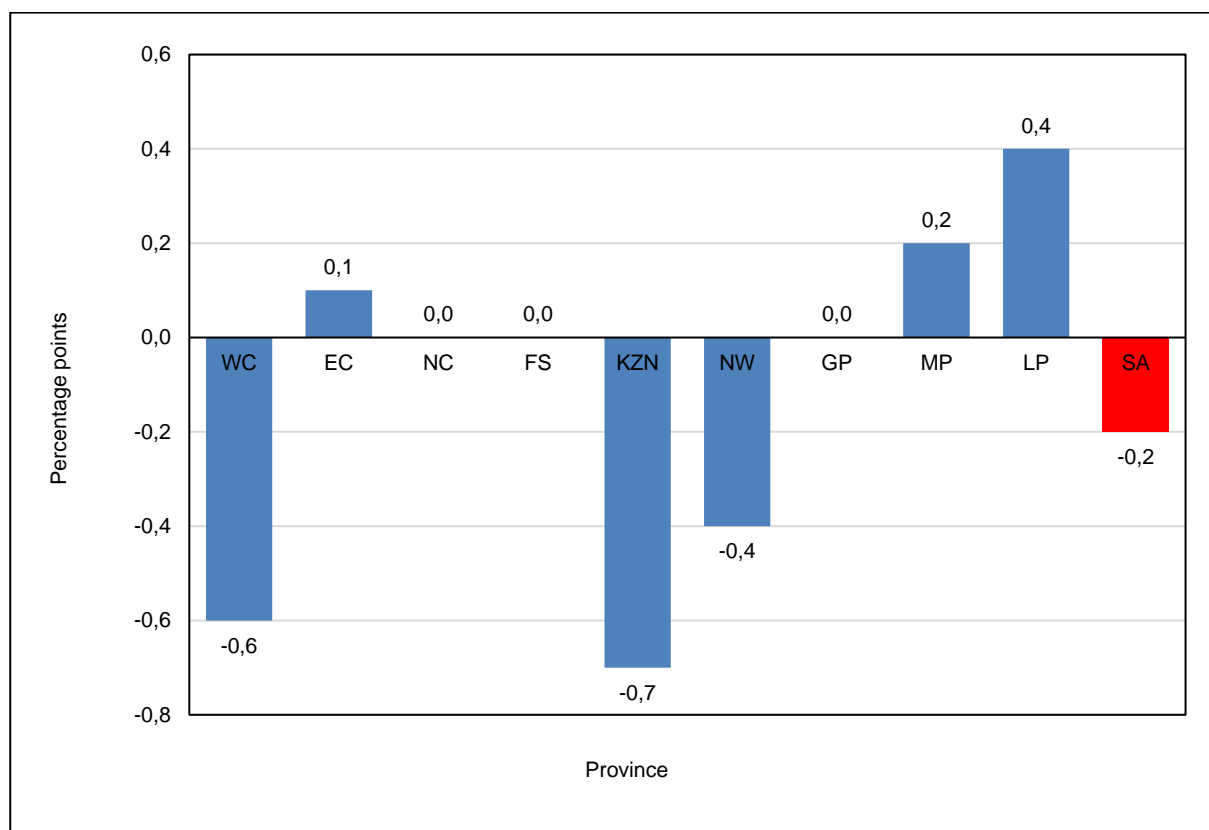


Source: National Department of Health, 2014–2018

Figure 4.3 highlights the percentage points for live births born weighing less than 2 500 grams in South Africa for 2014 and 2018. The country recorded a decrease in live births born weighing less than 2 500 grams by 0,2 percentage points to 12,9% in 2018 as compared to 13,1% in 2014.

Three provinces had an increase in newborns with low birth weight, were Limpopo recorded the highest increase up by 0,4 percentage points, followed by Mpumalanga and Eastern Cape up by 0,2 and 0,1 percentage points respectively. There was no change in Gauteng, Northern Cape and Free State. Meanwhile a highest decrease was recorded in KwaZulu-Natal (down by 0,7 percentage points), followed by Western Cape (down by 0,6 percentage points) and North West (down by 0,4 percentage points).

**Figure 4.3: Percentage change on children under 5 years born with low birth weight: 2014 and 2018**



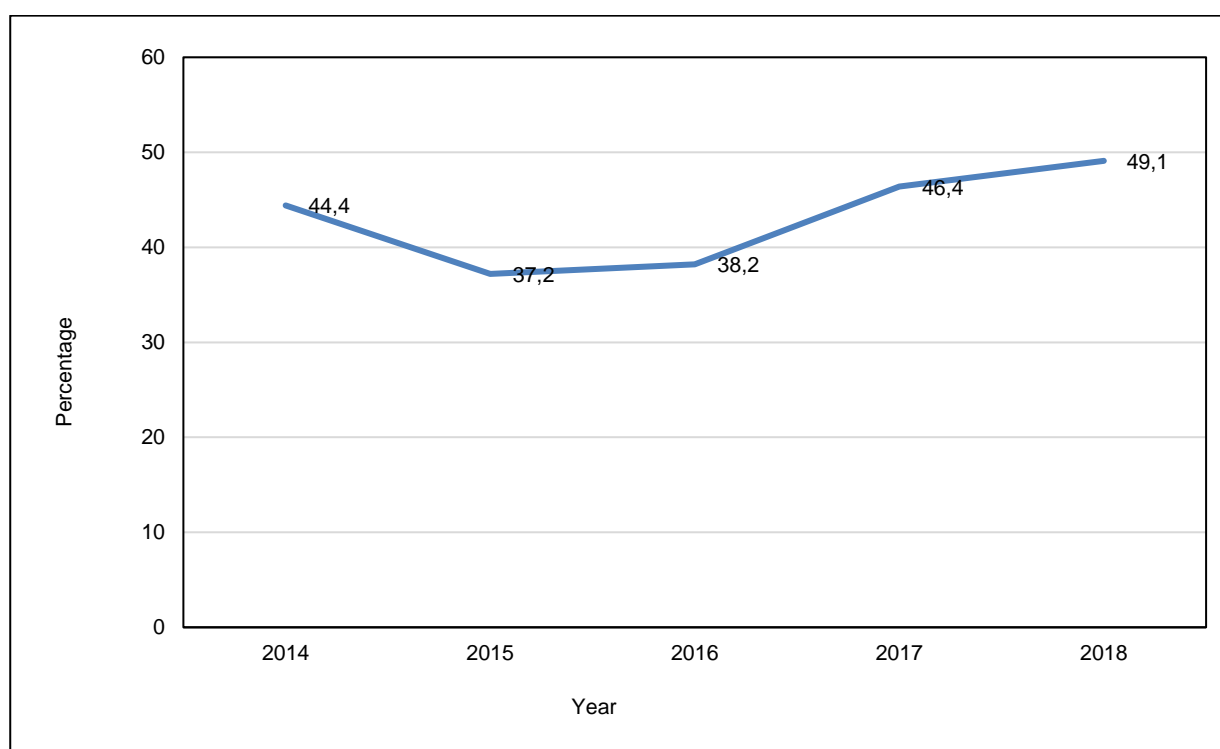
Source: National Department of Health, 2014–2018

## 4.2 Breastfeeding

Breastfeeding is an unmatched way of providing infants with ideal food for enhancing some healthy growth and development (WHO, 2020). Exclusive breastfeeding (EBF) is a means of no other food or drink, no water, except breast milk for 6 months after birth. The proportions were calculated by adding the sum of infants who were exclusively breastfed at hexavalent 3rd dose divided by children who received hexavalent 3rd dose.

Figure 4.4 reflects the percentage of children who were exclusively breastfed and received hexavalent third dose in South Africa between 2014 and 2018. Nationally, a steep decrease was seen between 2014 and 2015 (44,4% to 37,2%), then a plateau between 2015 and 2016 (37,2% to 38,2%). A slight rise in the percentage of children who were breastfed and received third dose of hexavalent was highlighted between 2017 and 2018 (46,4% to 49,1%).

**Figure 4.4: Percentage of children who were exclusively breastfed and received hexavalent third dose in South Africa**

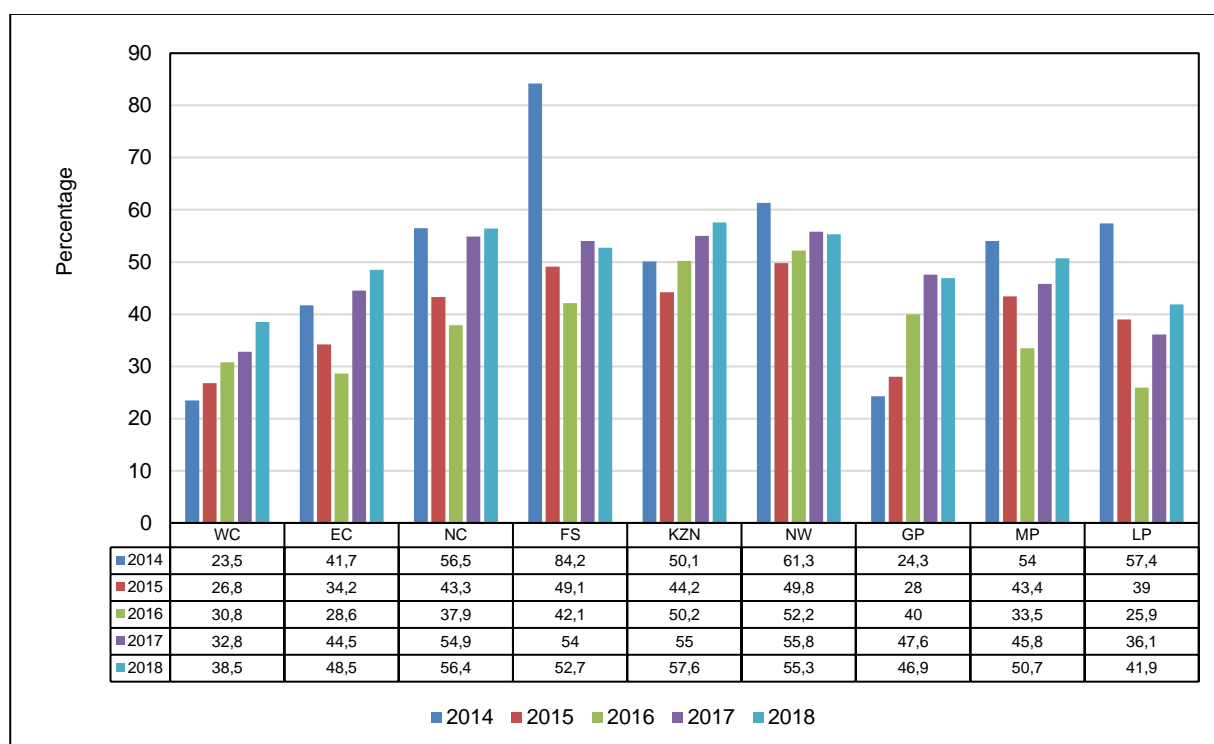


Source: National Department of Health, 2014–2018

Figure 4.5 shows the proportion of infants who were exclusively breastfed according to information from provinces between 2014 and 2018. In 2014, Free State had the highest proportion (84,2%) of infants who were exclusively breastfed followed by North West (61,3%). Three provinces that had proportions less than 50% in 2014 were Eastern Cape (41,7%), Gauteng (24,3%) and Western Cape (23,5%). The proportion of infants who are exclusively breastfed has been increasing with increasing years in the Western Cape (23,5% to 39,3%). In the Northern Cape, the proportion of infants who were exclusively breastfed was the lowest in 2015 as compared to other years in the province but the proportion was the highest (49,8%) in the country as compared to other provinces in 2015. The proportion of infants who were exclusively breastfed were below 50% in all the provinces countrywide.

Limpopo (25,9%) and Eastern Cape (28,6%) had a lower proportion of infants who were exclusively breastfed in 2016. From 2017 to 2019 the proportion of infants who were exclusively breastfed was stable with some variations in other provinces. Between 2017 and 2018 the proportion of infants who were exclusively breastfed increased in most of the provinces with the exception of Free State (54% to 52,7%) and Gauteng (47,6% to 46,9%).

**Figure 4.5: Percentage of children under 5 years who were exclusively breastfed and received hexavalent third dose by province**

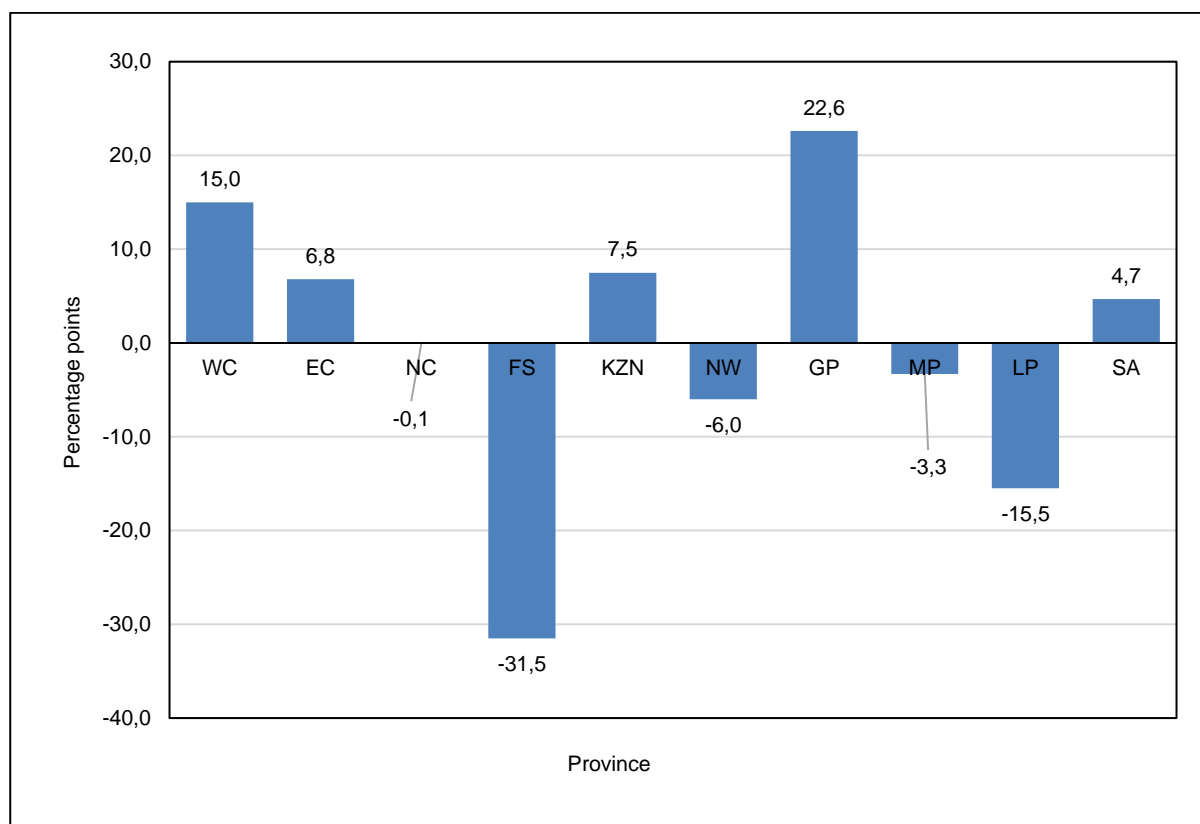


Source: National Department of Health, 2014–2018

Figure 4.6 depicts the percentage points of children who were exclusively breastfed and received hexavalent third dose by province for the years 2014 and 2018. Children who were exclusively breastfed and received hexavalent third dose increased by 4,7 percentage points from 44,4% in 2014 to 49,1% in 2018.

Infant exclusively breastfed at hexavalent third dose rate increased in four provinces, namely, Gauteng, Western Cape, KwaZulu-Natal and Eastern Cape. Gauteng recorded the highest increase (up by 22,6 percentage points), followed by Western Cape (up by 15 percentage points). A decrease in infants exclusively breastfed at hexavalent third dose rate was recorded in Free State, Limpopo, North West, Mpumalanga and Northern Cape provinces. Free State experienced the highest decrease in infants exclusively breastfed at hexavalent third dose rate down by 37,1 percentage points, followed by Limpopo province down by 15,5 percentage points.

**Figure 4.6: Percentage change of children under 5 years who were exclusively breastfed and received hexavalent third dose: 2014 and 2018**



Source National Department of Health: 2014-2018

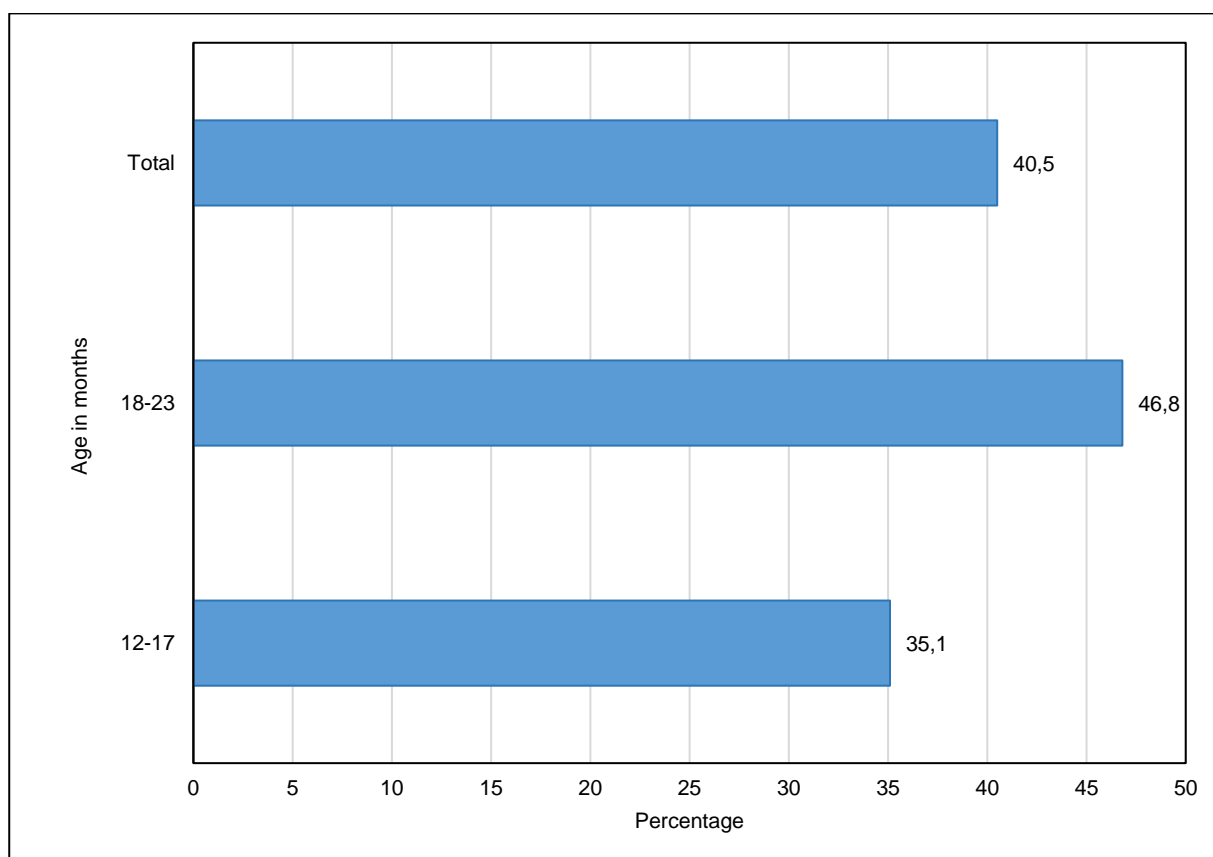


### 4.3 Micronutrients intake

This section presents information on micronutrient intake from the SADHS 2016. It highlights topics related to the nutrition of children under 5 years, including micronutrient intake such as iron and liver.

Results on liver consumption were retrieved from the SADHS 2016 and therefore can only be addressed at national level, not at other demographic characteristics. Liver is an iron-rich food and that is why it is addressed in this section of anaemia because iron-deficiency might lead to anaemia. It was highlighted that 41% of the children 12–23 months have ever eaten liver. When the category 12–23 months was further broken down, 35,1% of younger children (12–17 months) and 46,8% of older children (18–23 months) have ever eaten liver.

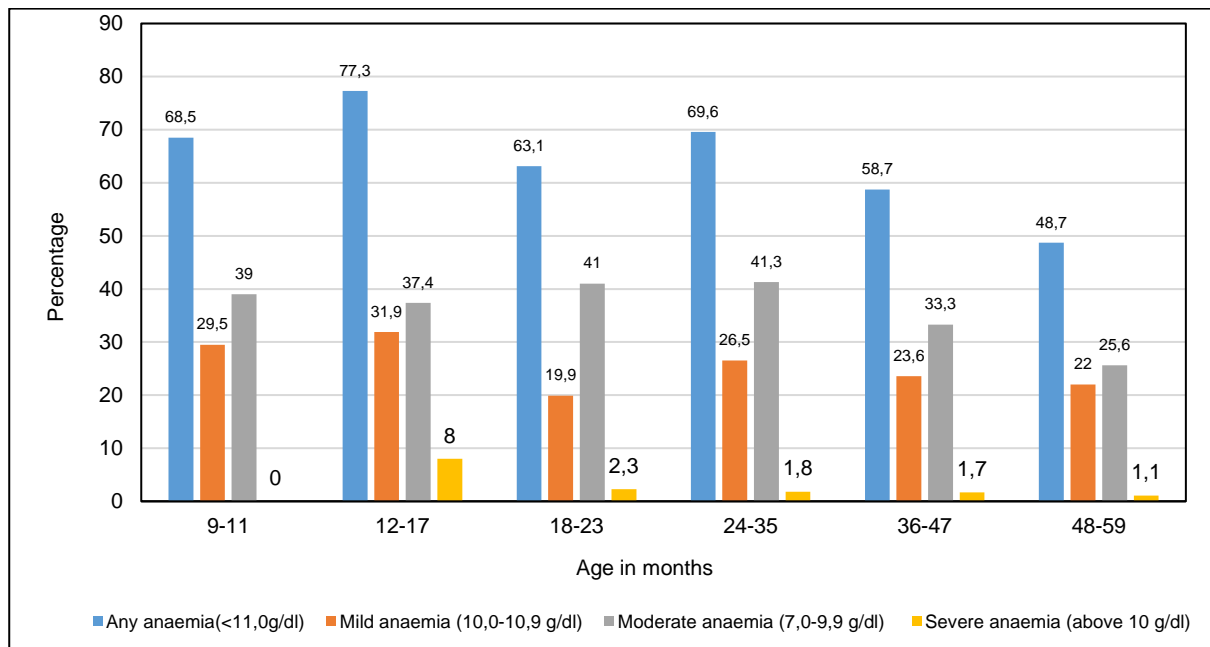
**Figure 4.7: Proportion of children 12–23 months who have ever eaten liver, SADHS 2016**



Source: South Africa Demographic and Health Survey, 2016

Results presented in Figure 4.8 show that the most common anaemia for children under 5 years was any anaemia less than 11 g/dl, followed by moderate anaemia (7–9 g/dl). Figures for severe anaemia (greater than 10 g/dl) were low for other age groups, but seen to be affecting children aged 12–17 months more than any other group.

**Figure 4.8: Proportion of children under 5 years by types of anaemia, SADHS 2016**

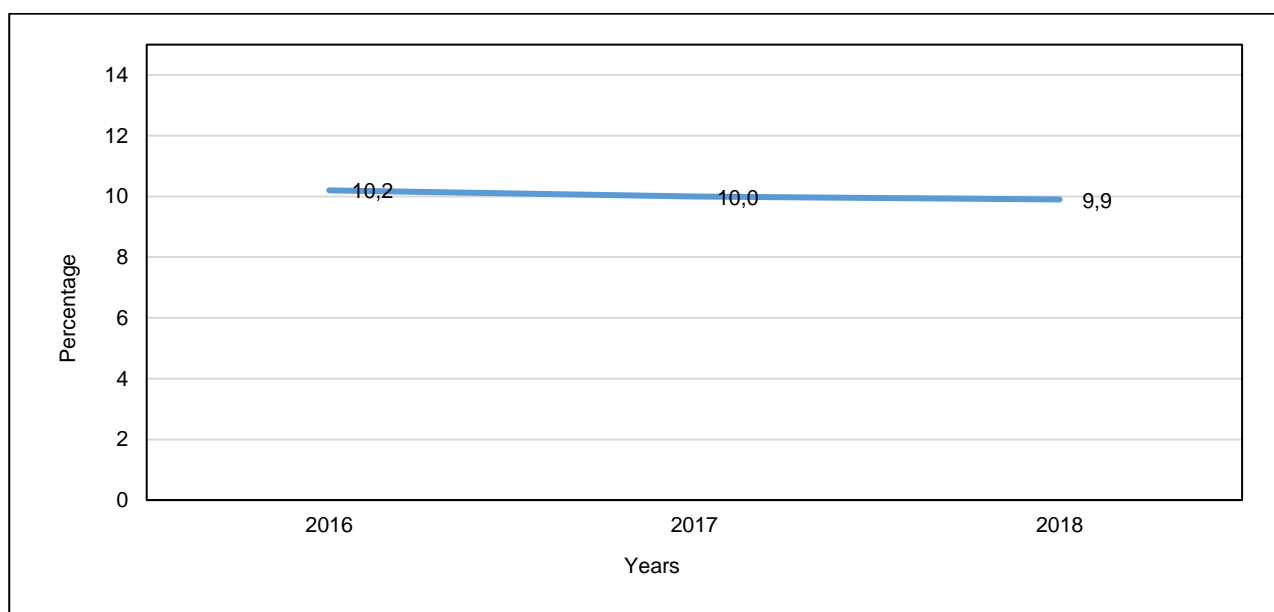


Source: South Africa Demographic and Health Survey, 2016

#### 4.4 Severe acute malnutrition

Figure 4.9 presents the proportion of children under 5 years with severe acute malnutrition (SAM) incidences between 2016 and 2018. Nationally, proportions of children under-5 years with (SAM) incidences decreased slightly from 3,6% in 2016 to 2,1% in 2017. It slightly increased from 2,1% in 2017 to 2,2% in 2018.

**Figure 4.9: Proportion of children under 5 years with severe acute malnutrition in South Africa**

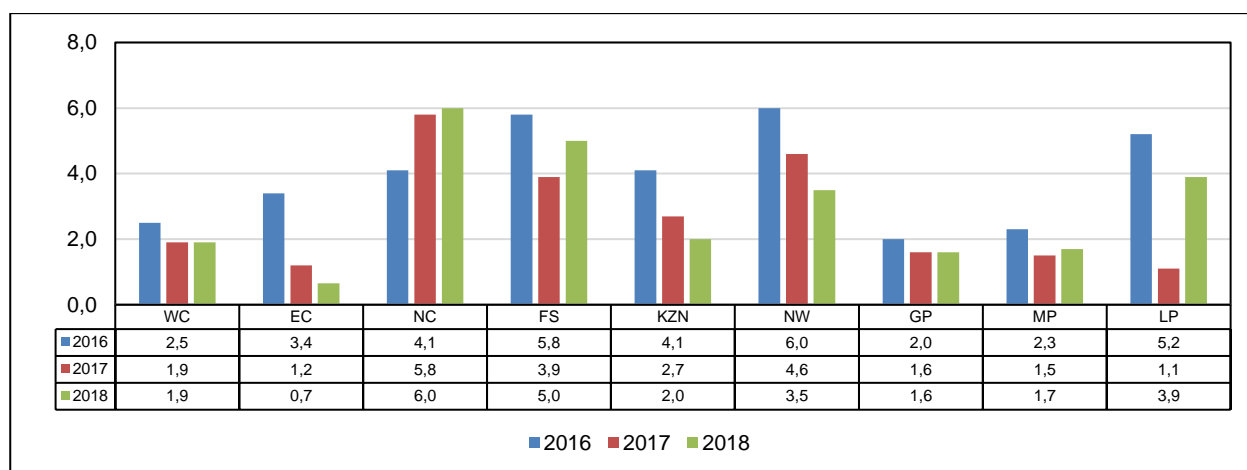


Source: National Department of Health, 2016-2018

Figure 4.10 presents the proportion of children under 5 years with severe acute malnutrition (SAM) incidences for years between 2016 and 2018. In 2016, North West, Free State and Limpopo had the highest proportion of severe acute malnutrition (SAM) incidences at 6%, 5,8% and 5,2% respectively. Gauteng, Mpumalanga and Western Cape provinces had the lowest proportion of SAM incidences at 2%, 2,3% and 2,5%. In 2017, the proportion of SAM incidences were below 5% in most of the provinces with the exception of Northern Cape where the incidence was 5,8%.

In 2017, Limpopo, Eastern Cape and Mpumalanga had the lowest proportion of SAM incidences at 1,1%, 1,2% and 1,5% respectively. In 2018, Northern Cape, Free State and North West had the highest proportion of SAM incidences of 6%, 5% and 4,6% respectively while Eastern Cape, Gauteng and Mpumalanga had the lowest proportions at 0,7%, 1,6 % and 1,7% respectively.

**Figure 4.10: Proportion of children under 5 years with severe acute malnutrition by province**

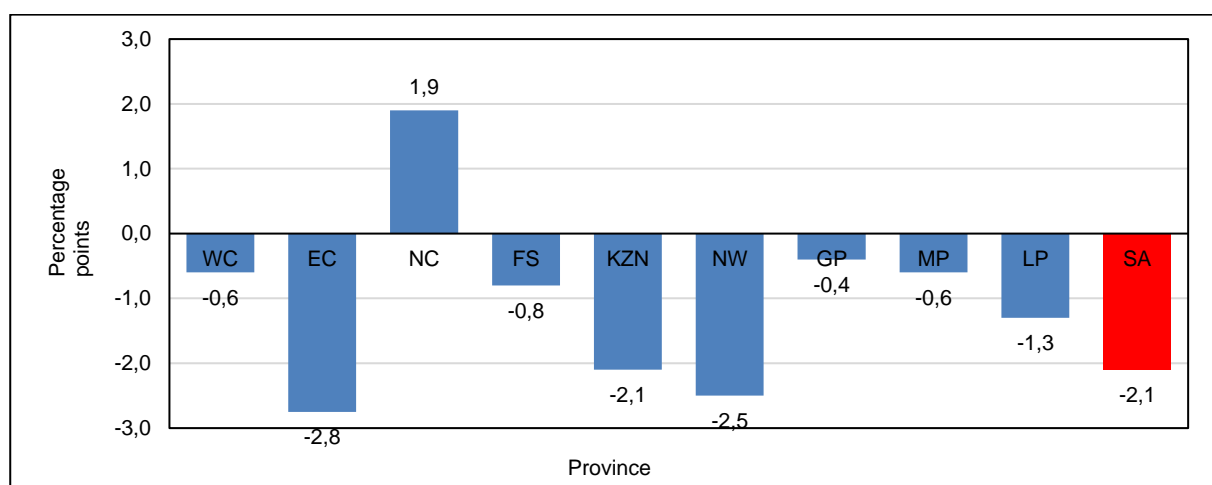


Source: National Department of Health, 2016–2018

Figure 4.11 below presents the percentage points of children under 5 years with SAM incidences in South Africa for the years 2016 and 2018. Nationally, SAM incidence decreased by 2,1 percentage points from 4,3% in 2016 to 2,1% in 2018.

Eight of the nine provinces recorded a decrease in SAM incidences, for 2016 and 2018. Eastern Cape recorded the largest decrease; down by 2,8 percentage points, followed by North West (down by 2,5 percentage points) and KwaZulu-Natal (down by 2,1 percentage points). Meanwhile, Northern Cape is the only province which recorded an increase in SAM incidences, up by 1,9 percentage points for the same period.

**Figure 4.11: Percentage points of children with severe acute malnutrition: 2016 and 2018**

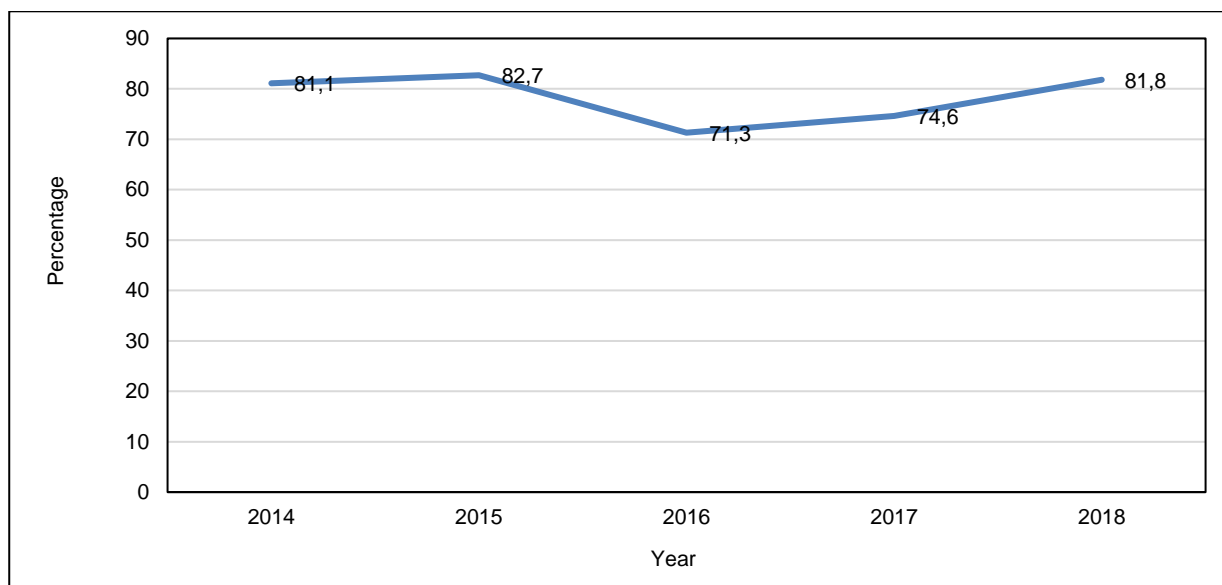


Source: National Department of Health, 2016-2018

## 4.5 Vaccination

Figure 4.12 presents the proportion of children under one year who are vaccinated in South Africa between 2016 and 2018. Nationally, the percentage of children under one year who are vaccinated increased slightly from 81,1% in 2014 to 82,7% in 2015. However, a steep decrease was observed between 2015 and 2016 (82,7% to 71,3%). A recovery in the percentage was again seen between 2016 and 2018 (71,3% to 81,8%).

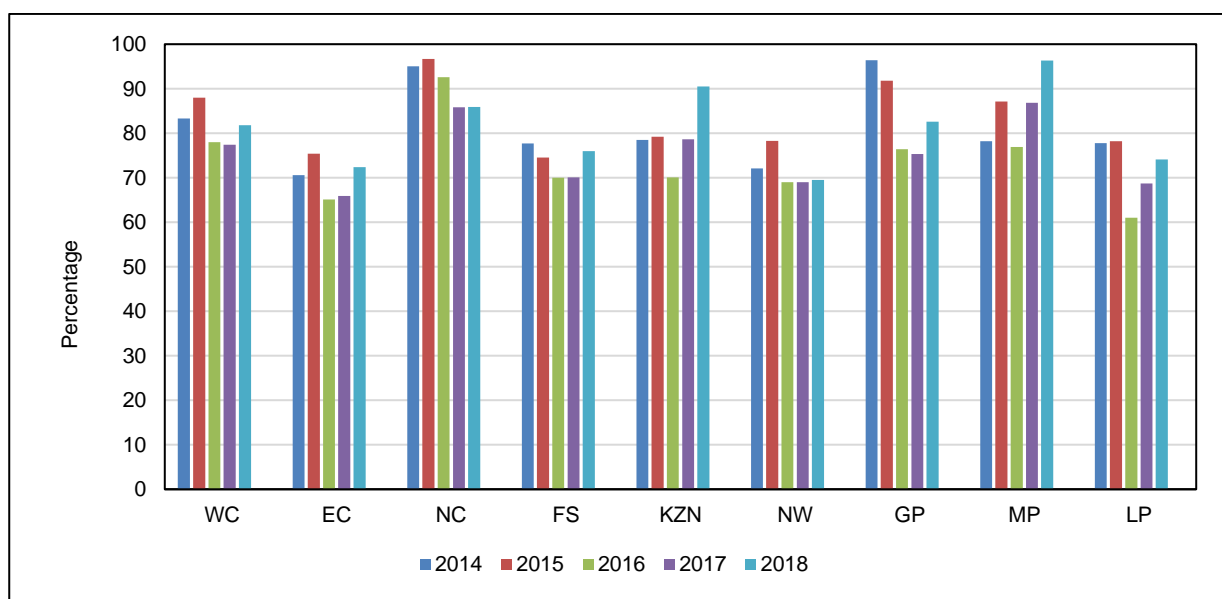
**Figure 4.12: Percentage of children under 1 year who are vaccinated in South Africa**



Source: National Department of Health, 2014-2018

Results in Figure 4.13 show vaccination coverage by province. Nationally, the proportion of children vaccinated in the country was above 60% in all the provinces between 2014 and 2018. Provinces such as Western Cape, Eastern Cape, Free State, North West, and Limpopo have never reached the target of 90% coverage as outlined by the WHO, while Gauteng had the highest (96,4%). The Eastern Cape had the lowest coverage of 70% when compared to other provinces in 2014. In 2016, the proportion of vaccination coverage decreased in all the provinces as compared to the vaccination coverage of 2015.

**Figure 4.13: Percentage of children under 1 year who are vaccinated by province**

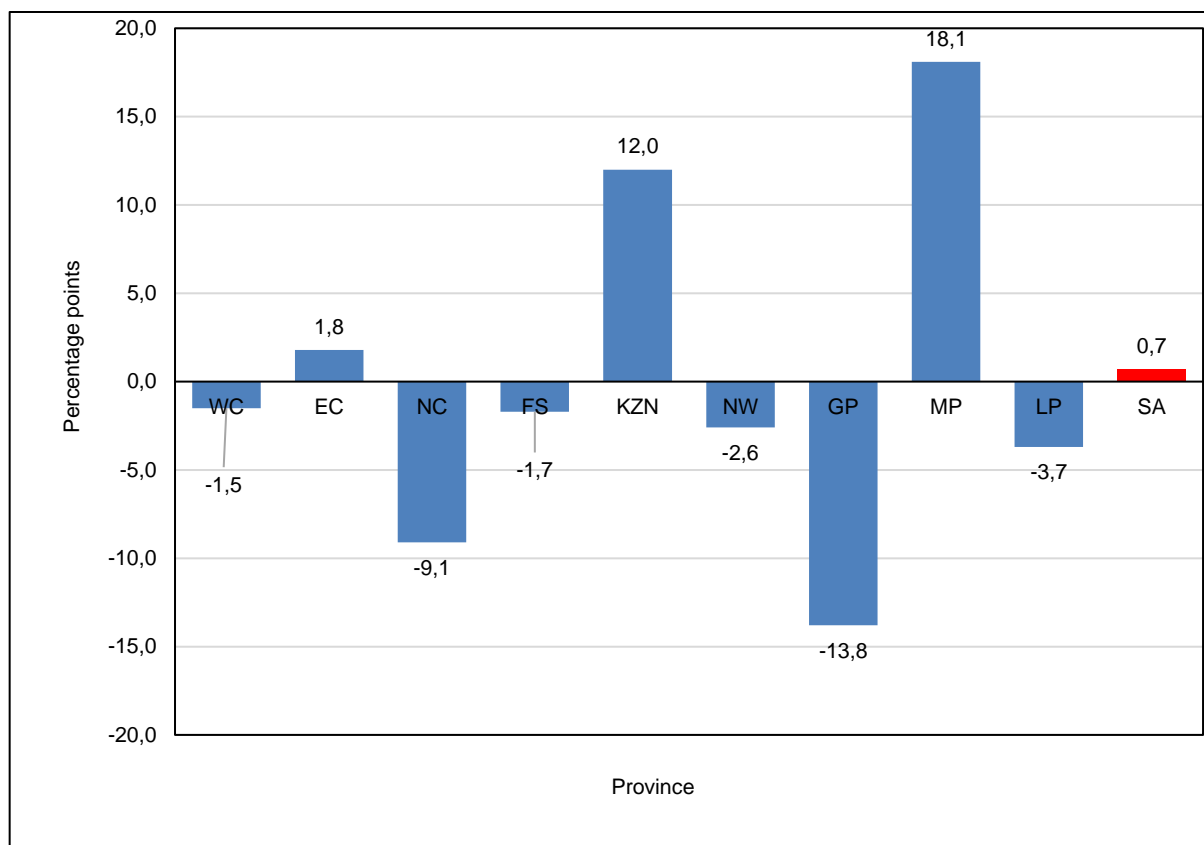


Source: National Department of Health, 2014-2018

Figure 4.14 highlights the percentage points of children under 1 who completed their primary course of immunisation in South Africa by province for 2014 and 2018. Vaccination coverage increased by 0,7 percentage points to 81,8% in 2018 as compared to 81,1%.

Mpumalanga (up by 18,1 percentage points), KwaZulu-Natal (up by 12,0 percentage points) and Eastern Cape (up by 1,8 percentage points) recorded an increase of children under 1 who completed their primary course of immunisation. The other six provinces recorded a decrease in vaccination coverage, with Gauteng recording the largest decrease, followed by Northern Cape and Limpopo, down by 13,8, 9,0 and 3,7 percentage points, respectively. The other three provinces recorded decreases of less than 3,7 percentage points.

**Figure 4.14: Percentage points of children under 1 year who were vaccinated: 2014 and 2018**



National Department of Health, 2014 and 2018

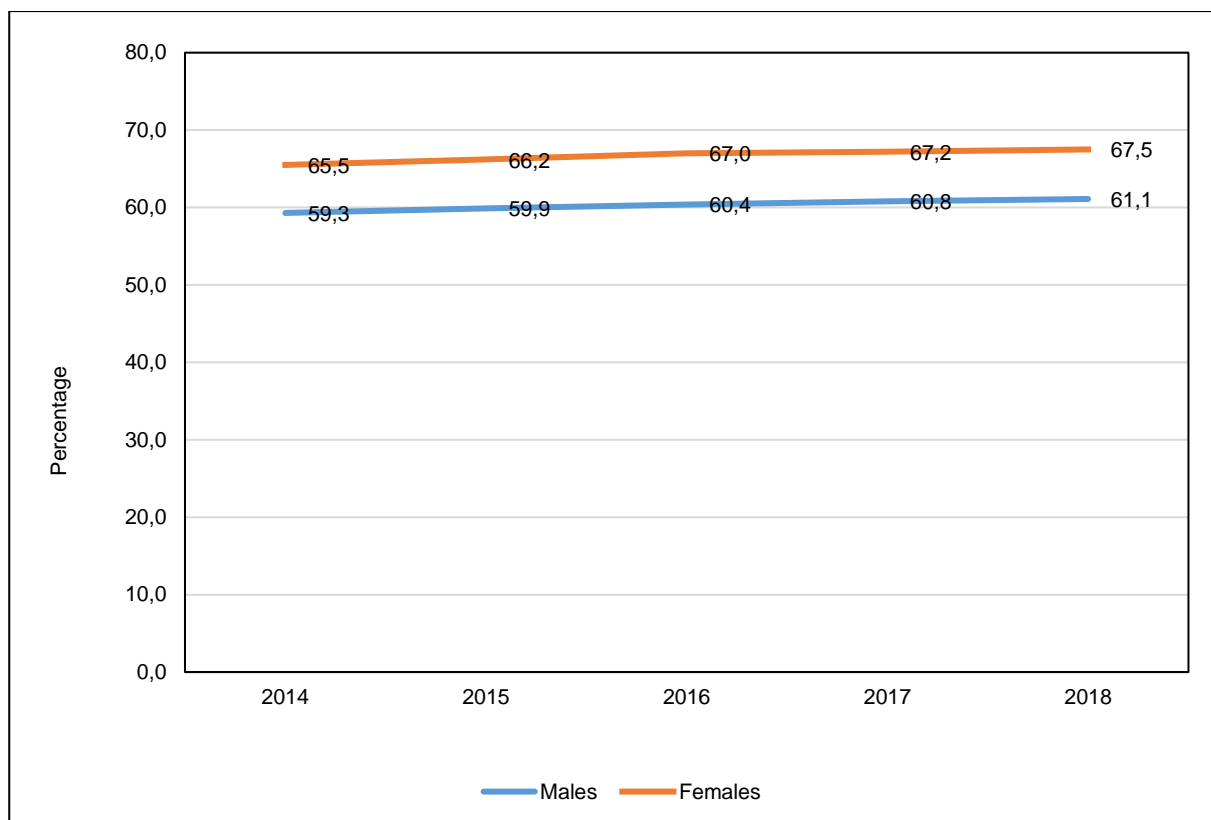
## CHAPTER 5

### 5.1 Life expectancy

The National Development Plan (NDP) envisions a life expectancy of at least 70 years by the 2030, with a largely HIV free population below 20 years, 28% reduction in non-communicable diseases, and combating the tuberculosis and HIV/AIDS epidemics by 2030 (Stats SA, 2018).

Figure 5.1 outlines the proportion of life expectancy at birth in the country from 2014 to 2018. There has been an increase in the proportion of life expectancy for males and females and the country as from 2014 to 2018. The proportion of life expectancy for females was higher than the proportion of life expectancy for males and the country. The proportion of life expectancy for males is lower than 62% for all the years and the proportion of females is lower than 68% for all the years. The gap between the female and male trends is consistently open, with no sign of divergence or narrowing towards each other.

**Figure 5.1: Trend in the proportion of life expectancy at birth by sex in South Africa**



Source: Mid-year population estimates, 2014–2018

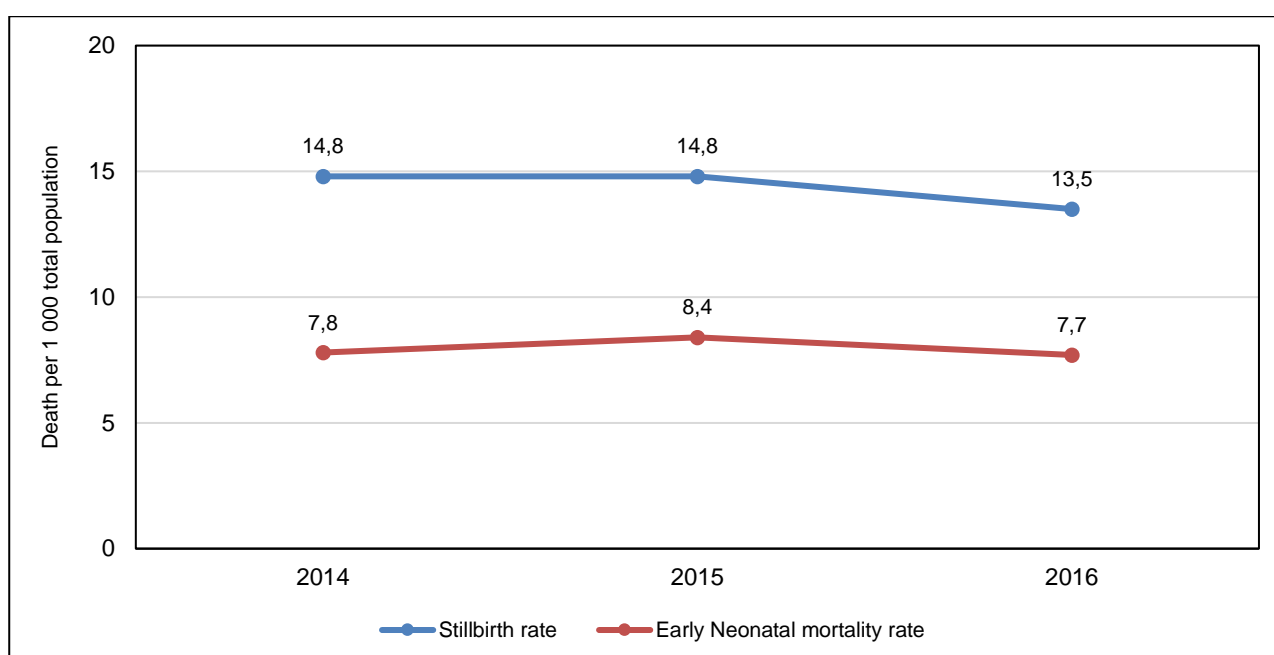
## 5.2 Mortality

This section presents information on trends regarding stillbirths, early neonatal, infant and under 5 mortality rates. It further presents a trend on the top leading natural causes of death for children under 5 years in South Africa between 2014 to 2017.

Figure 5.2 depicts the stillbirth and early neonatal mortality rates from 2014 to 2016. The stillbirth rate remained constant for 2014 and 2015 at 14,8 stillbirths per 1 000 total births and decreased to 13,5 stillbirths per 1 000 total births in 2016.

Early neonatal rate fluctuated between 2014 and 2016. The highest early neonatal rate of 8,4 early neonatal deaths per 1 000 live births was recorded in 2015. The lowest was rates was recorded in 2016 at 7,7 early neonatal deaths per 1 000 live births.

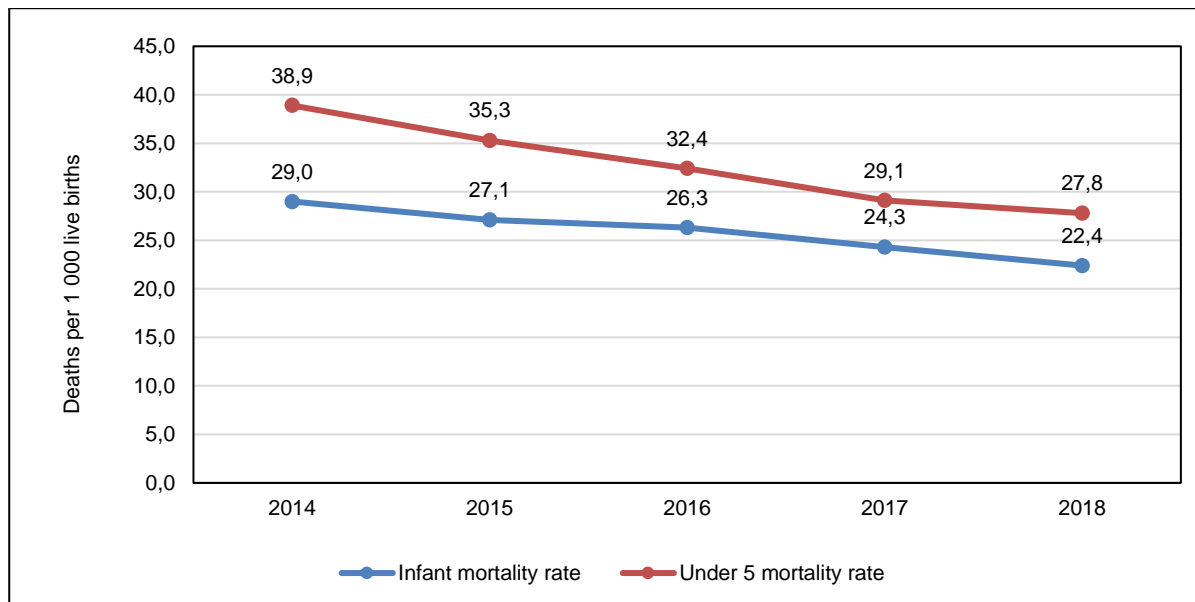
**Figure 5.2: Percentages of stillbirths and neonates mortality in South Africa**



Source: Mid year population estimates, 2014-2016\*

Figure 5.3 depicts the infant and under 5 mortality rates over the period of five years. Both infant and under 5 mortality rates show a consistent decline over time. The highest infant mortality and under 5 mortality rates were observed in 2014 at 29,0 infant deaths per 1 000 live births and 38,9 under 5 deaths per 1 000 live births, respectively.

**Figure 5.3: Infant and under 5 mortality rates in South Africa in South Africa**



Source: Mid year population estimates, 2014–2018



### 5.3 Causes of death

Table 5.1 presents a four-year trend analysis for the top leading underlying causes of death for children under 5 years. *Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)* is the top leading underlying cause of death for children under 5 years as from 2015 to 2017. In 2014, *intestinal infectious diseases (A00-A09)* was the top leading cause of deaths for children under 5 years at 13,7%. The country experienced a decrease in the percentage distribution of *intestinal infectious diseases (A00-A09)*, and *influenza and pneumonia (J09-J18)* while there was an increase in other top underlying causes of death during the four year period.

**Table 5.1: The top five leading natural causes of death among under 5 years in South Africa**

| Underlying Broad group of underlying causes   | 2017 |               |              | 2016 |               |              | 2015 |               |              | 2014 |               |              |
|---|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|
|   | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1    | 3 166         | 12,4         | 1    | 3 327         | 11,4         | 1    | 3 935         | 11,9         | 2    | 3 895         | 10,9         |
| Influenza and pneumonia (J09-J18)   | 2    | 2 073         | 8,1          | 2    | 2 434         | 8,4          | 3    | 2 743         | 8,3          | 3    | 3 184         | 8,9          |
| Intestinal infectious diseases (A00-A09)  | 3    | 1 732         | 6,8          | 3    | 2 090         | 7,2          | 2    | 3 310         | 10,0         | 1    | 4 917         | 13,7         |
| Disorders related to length of gestation and fetal growth (P05-P08)                 | 4    | 1 274         | 5,0          | 5    | 1 259         | 4,3          | 5    | 1 404         | 4,2          | ...  | ...           | ...          |
| Other disorders originating in the perinatal period (P90-P96)                       | 5    | 1 156         | 4,5          | 4    | 1 314         | 4,5          | ...  | ...           | ...          | 5    | 1 422         | 4,0          |
| Malnutrition (E40-E46)  | ...  | ...           | ...          | ...  | ...           | ...          | 4    | 1 511         | 4,6          | 4    | 1 662         | 4,6          |
| Natural   |      | 14 175        | 55,4         |      | 16 182        | 55,7         |      | 17 534        | 53,1         |      | 18 120        | 50,6         |
| Non-natural   |      | 2 024         | 7,9          |      | 2 452         | 8,4          |      | 2 599         | 7,9          |      | 2 621         | 7,3          |
| <b>Total</b>  |      | <b>25 600</b> | <b>100,0</b> |      | <b>29 058</b> | <b>100,0</b> |      | <b>33 036</b> | <b>100,0</b> |      | <b>35 821</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017

## 5.4 Causes of death by sex

Table 5.2 presents trend analysis of the top five leading natural cause of death among male children under-5 years for 2014 to 2017, as the recent year since 2018 data is not yet released.

In 2017, the leading natural cause of death among male children was *respiratory and cardiovascular disorders specific to the perinatal period* (12,7%), followed by *influenza and pneumonia* in the second place at 7,8%, then *intestinal infectious diseases* in the third place (6,6%). Disorders related to the length of gestation was in fourth place (5,0%). *Other disorders originating in the perinatal period* is the fifth leading cause of death (4,8%).

The trend analysis shows no consistent pattern from 2014 to 2017 for both *respiratory and cardiovascular disorders specific to the perinatal period*, *influenza and pneumonia* and *other disorders originating in the perinatal period*. There was a decrease in deaths from *intestinal infectious diseases* from 14,1% in 2014 to 6,6% in 2017. Information on *malnutrition* is only for 2014 and 2015, so trend will not be clearly visible.

**Table 5.2: The top five leading natural causes of death among male children under 5 years**

| Underlying Broad group of underlying causes   | 2017 |               |              | 2016 |               |              | 2015 |               |              | 2014 |               |              |
|---|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|
|   | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1    | 1 740         | 12,7         | 1    | 1 824         | 11,8         | 1    | 2 072         | 12,0         | 2    | 2 099         | 11,1         |
| Influenza and pneumonia (J09-J18)   | 2    | 1 062         | 7,8          | 2    | 1 298         | 8,4          | 3    | 1 381         | 8,0          | 3    | 1 595         | 8,4          |
| Intestinal infectious diseases (A00-A09)  | 3    | 898           | 6,6          | 3    | 1 058         | 6,9          | 2    | 1 688         | 9,8          | 1    | 2 666         | 14,1         |
| Disorders related to length of gestation and fetal growth (P05-P08)                 | 4    | 677           | 5,0          | 5    | 638           | 4,1          | 5    | 741           | 4,3          | ...  | ...           | ...          |
| Other disorders originating in the perinatal period (P90-P96)                       | 5    | 658           | 4,8          | 4    | 704           | 4,6          | ...  | ...           | ...          | 5    | 771           | 4,1          |
| Malnutrition (E40-E46)  | ...  | ...           | ...          | ...  | ...           | ...          | 4    | 809           | 4,7          | 4    | 901           | 4,8          |
| Other natural causes  |      | 7 490         | 54,8         |      | 8 553         | 55,5         |      | 9 111         | 52,8         |      | 9 435         | 49,9         |
| Non-natural causes  |      | 1 134         | 8,3          |      | 1 331         | 8,6          |      | 1 461         | 8,5          |      | 1 445         | 7,6          |
| <b>Total</b>  |      | <b>13 659</b> | <b>100,0</b> |      | <b>15 406</b> | <b>100,0</b> |      | <b>17 263</b> | <b>100,0</b> |      | <b>18 912</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017

Table 5.3 presents trend analysis of the top five leading natural causes of death among female children under 5 years for 2014 to 2017, as the recent year since 2018 data is not yet released.

In 2017, the leading natural cause of death among female children was *respiratory and cardiovascular disorders specific to the perinatal period* (11,9%), followed by *influenza and pneumonia* in the second place at 8,5%, then *intestinal infectious diseases* in the third place (7,0%). *Other disorders originating in the perinatal period* is the fifth leading cause of death (4,1%).

The trend analysis shows no consistent pattern from 2014 to 2017 for both *respiratory and cardiovascular disorders specific to the perinatal period*, *other disorders originating in the perinatal period* and *disorders related to length of gestation and fetal growth*.

There was a decrease in deaths from *intestinal infectious diseases* from 13,5% in 2014 to 7,0% in 2017 and those from *influenza and pneumonia* from 9,6% in 2014 to 8,5% in 2017. An increase was observed for deaths from *disorders related to length of gestation and fetal growth* from 4,1% in 2015 to 5,0% in 2017.

**Table 5.3: The top five leading natural causes of death among female children under 5 years**

| Underlying Broad group of underlying causes   | 2017 |               |              | 2016 |               |              | 2015 |               |              | 2014 |               |              |
|---|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|
|   | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1    | 1 418         | 11,9         | 1    | 1 404         | 10,7         | 1    | 1 717         | 11,4         | 2    | 1 680         | 10,3         |
| Influenza and pneumonia (J09-J18)   | 2    | 1 006         | 8,5          | 2    | 1 115         | 8,5          | 3    | 1 338         | 8,9          | 3    | 1 556         | 9,6          |
| Intestinal infectious diseases (A00-A09)  | 3    | 834           | 7,0          | 3    | 1 005         | 7,6          | 2    | 1 594         | 10,6         | 1    | 2 199         | 13,5         |
| Disorders related to length of gestation and fetal growth (P05-P08)                 | 4    | 591           | 5,0          | 4    | 582           | 4,4          | 5    | 620           | 4,1          | ...  | ...           | ...          |
| Other disorders originating in the perinatal period (P90-P96)                       | 5    | 490           | 4,1          | ...  | ...           | ...          | ...  | ...           | ...          | 5    | 573           | 3,5          |
| Malnutrition (E40-E46)  | ...  | ...           | ...          | 5    | 564           | 4,3          | 4    | 685           | 4,5          | 4    | 746           | 4,6          |
| Other natural causes  |      | 6 641         | 56,0         |      | 7 406         | 56,2         |      | 8 048         | 53,3         |      | 8 374         | 51,5         |
| Non-natural causes  |      | 888           | 7,5          |      | 1 092         | 8,3          |      | 1 094         | 7,2          |      | 1 127         | 6,9          |
| <b>Total</b>  |      | <b>11 868</b> | <b>100,0</b> |      | <b>13 168</b> | <b>100,0</b> |      | <b>15 096</b> | <b>100,0</b> |      | <b>16 255</b> | <b>100,0</b> |

Mortality and causes of death, 2014-2017

## 5.5 Causes of death by population group

Table 5.4 presents the top leading natural causes of death for black African children between 2014 and 2017. In the recent year 2017, the leading cause of deaths among black African children was *respiratory and cardiovascular disorders specific to the perinatal period* (13,1%), followed by *influenza and pneumonia* (8,7%), *intestinal infectious diseases* in third rank (7,5%), then *disorders related to length of gestation and fetal growth* (5,1%) and *infections specific to the perinatal period* at 4,8%.

Results show a decrease in deaths from *respiratory and cardiovascular disorders specific to the perinatal period* between 2014 and 2017, *influenza and pneumonia* and *deaths from infections specific to the perinatal period*. A decrease was observed in deaths from the *intestinal infectious diseases* from 15,0% in 2014 to 7,5% in 2017, while an increase was seen in deaths from *infections specific to the perinatal period* (3,8% in 2014 to 4,8% in 2017), with the year 2015 excluded.

**Table 5.4: The top five leading natural causes of death among children under 5 years from the black African population group**

| Broad group of underlying causes  | 2017 |               |              | 2016 |               |              | 2015 |               |              | 2014 |               |              |
|---|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|------|---------------|--------------|
|   | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            | Rank | No            | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1    | 2 678         | 13,1         | 1    | 2 803         | 12,1         | 1    | 3 335         | 12,6         | 2    | 3 226         | 11,4         |
| Influenza and pneumonia (J09-J18)   | 2    | 1 782         | 8,7          | 2    | 2 123         | 9,2          | 3    | 2 366         | 8,9          | 3    | 2 725         | 9,6          |
| Intestinal infectious diseases (A00-A09)  | 3    | 1 525         | 7,5          | 3    | 1 834         | 7,9          | 2    | 2 914         | 11,0         | 1    | 4 267         | 15,0         |
| Disorders related to length of gestation and fetal growth (P05-P08)                 | 4    | 1 048         | 5,1          | ...  | ...           | ...          | 5    | 1 121         | 4,2          | ...  | ...           | ...          |
| Infections specific to the perinatal period (P35-P39)                               | 5    | 984           | 4,8          | 5    | 1 018         | 4,4          | ...  | ...           | ...          | 5    | 1 070         | 3,8          |
| Malnutrition (E40-E46)  | ...  | ...           | ...          | 4    | 1 050         | 4,5          | 4    | 1 373         | 5,2          | 4    | 1 507         | 5,3          |
| Natural   |      | 10 796        | 52,9         |      | 12 392        | 53,5         |      | 13 226        | 50,0         |      | 13 442        | 47,4         |
| Non-natural   |      | 1 614         | 7,9          |      | 1 934         | 8,4          |      | 2 105         | 8,0          |      | 2 127         | 7,5          |
| <b>Total</b>  |      | <b>20 427</b> | <b>100,0</b> |      | <b>23 154</b> | <b>100,0</b> |      | <b>26 440</b> | <b>100,0</b> |      | <b>28 364</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014-2017

Table 5.5 presents the top leading natural causes of death for Indian/Asian children between 2014 and 2017. In the recent year 2017, the leading cause of deaths among Indian/Asian children was *respiratory and cardiovascular disorders specific to the perinatal period* (12,6%), followed by *congenital malformations of the circulatory system* (9,1%), then *fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery* at 7,0%.

Results show no clear pattern for deaths from *respiratory and cardiovascular disorders specific to the perinatal period*, *influenza and pneumonia* and deaths from *infections specific to the perinatal period*. A decrease was observed in deaths from the *intestinal infectious diseases* from 15,0% in 2014 to 7,5% in 2017, while an increase was seen in deaths from *infections specific to the perinatal period* (3,8% in 2014 to 4,8% in 2017), with the year 2015 excluded.

**Table 5.5: The top five leading natural causes of death among children under 5 years from the Indian/Asian population group**

| Broad group of underlying causes  | 2017 |            |              | 2016 |            |              | 2015 |            |              | 2014 |            |              |
|---|------|------------|--------------|------|------------|--------------|------|------------|--------------|------|------------|--------------|
|   | Rank | No         | %            | Rank | No         | %            | Rank | No         | %            | Rank | No         | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1    | 18         | 12,6         | 1    | 18         | 11,5         | 1    | 21         | 13,7         | 1    | 31         | 14,7         |
| Congenital malformations of the circulatory system (Q20-Q28)  | 2    | 13         | 9,1          | 2    | 18         | 11,5         | 2    | 19         | 12,4         | 4    | 16         | 7,6          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 3    | 10         | 7,0          | 5    | 7          | 4,5          | 4    | 7          | 4,6          |      |            |              |
| Infections specific to the perinatal period (P35-P39)   | 4    | 8          | 5,6          | 4    | 12         | 7,7          | 3    | 15         | 9,8          | 3    | 12         | 5,7          |
| Other forms of heart disease (I30-I52)  | 5    | 7          | 4,9          |      |            |              |      |            |              |      |            |              |
| Disorders related to length of gestation and fetal growth (P05-P08)   |      |            |              | 3    | 14         | 9,0          | 5    | 7          | 4,6          | 2    | 17         | 8,1          |
| Influenza and pneumonia (J09-J18)   |      |            |              |      |            |              |      |            |              | 5    | 10         | 4,7          |
| Other natural   |      | 77         | 53,8         |      | 75         | 48,1         |      | 74         | 48,4         |      | 100        | 47,4         |
| Non-natural   |      | 10         | 7,0          |      | 12         | 7,7          |      | 10         | 6,5          |      | 25         | 11,8         |
| <b>Total</b>  |      | <b>143</b> | <b>100,0</b> |      | <b>156</b> | <b>100,0</b> |      | <b>153</b> | <b>100,0</b> |      | <b>211</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017

Table 5.6 presents the top leading natural causes of death among children from the coloured population group between 2014 and 2017. In the recent year 2017, the leading cause of deaths among coloured children was *respiratory and cardiovascular disorders specific to the perinatal period* (12,6%), followed by *congenital malformations of the circulatory system* (9,1%), then *fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery* at 7,0%.

In terms of trends, there was an increase for deaths from *respiratory and cardiovascular disorders specific to the perinatal period* from 2016 to 2017. An increase was also seen in deaths from *disorders related to length of gestation and fetal growth* from 2014 to 2016.

**Table 5.6: The top five leading natural causes of death among children under 5 years from the coloured population group**

| Broad group of underlying causes  | 2017 |             |              | 2016 |             |              | 2015 |             |              | 2014 |             |              |
|---|------|-------------|--------------|------|-------------|--------------|------|-------------|--------------|------|-------------|--------------|
|   | Rank | No          | %            | Rank | No          | %            | Rank | No          | %            | Rank | No          | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1    | 182         | 12,6         | 1    | 185         | 11,4         | 1    | 184         | 11,0         | 1    | 211         | 11,6         |
| Influenza and pneumonia (J09-J18)   | 2    | 106         | 7,4          | 3    | 108         | 6,6          | 2    | 137         | 8,2          | 3    | 143         | 7,9          |
| Disorders related to length of gestation and fetal growth (P05-P08)   | 3    | 100         | 6,9          | 2    | 127         | 7,8          | 3    | 128         | 7,7          | 4    | 122         | 6,7          |
| Infections specific to the perinatal period (P35-P39)   | 4    | 69          | 4,8          | ...  | ...         | ...          | ...  | ...         | ...          | ...  | ...         | ...          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 5    | 68          | 4,7          | 4    | 94          | 5,8          | ...  | ...         | ...          | ...  | ...         | ...          |
| Other disorders originating in the perinatal period (P90-P96)   | ...  | ...         | ...          | 5    | 80          | 4,9          | 5    | 76          | 4,6          | 5    | 79          | 4,3          |
| Intestinal infectious diseases (A00-A09)  | ...  | ...         | ...          | ...  | ...         | ...          | 4    | 78          | 4,7          | 2    | 158         | 8,7          |
| Other natural causes  |      | 800         | 55,5         |      | 865         | 53,2         |      | 926         | 55,6         |      | 956         | 52,5         |
| Non-natural   |      | 117         | 8,1          |      | 166         | 10,2         |      | 137         | 8,2          |      | 151         | 8,3          |
| <b>Total</b>  |      | <b>1442</b> | <b>100,0</b> |      | <b>1625</b> | <b>100,0</b> |      | <b>1666</b> | <b>100,0</b> |      | <b>1820</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014-2017

Table 5.7 presents the top leading natural causes of death among children from the white population group between 2014 and 2017. In the recent year 2017, the leading cause of deaths among children from the white population group was *respiratory and cardiovascular disorders specific to the perinatal period* (10,7%), followed by *fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery* (6,9%), *infections specific to the perinatal period* (6,3%).

Results show no clear pattern for deaths from *respiratory and cardiovascular disorders specific to the perinatal period*, *influenza and pneumonia* and *deaths from infections specific to the perinatal period*. A decrease was observed in deaths from the *intestinal infectious diseases* from 15,0% in 2014 to 7,5% in 2017, while an increase was seen in deaths from *infections specific to the perinatal period* (3,8% in 2014 to 4,8% in 2017), with the year 2015 excluded.

**Table 5.7: The top five leading natural causes of death among children under 5 years from the White population group**

| Broad group of underlying causes  | 2017 |            |              | 2016 |            |              | 2015 |            |              | 2014 |            |              |
|---|------|------------|--------------|------|------------|--------------|------|------------|--------------|------|------------|--------------|
|   | Rank | No         | %            | Rank | No         | %            | Rank | No         | %            | Rank | No         | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1    | 39         | 10,7         | 1    | 44         | 12,5         | 1    | 46         | 13,3         | 1    | 67         | 14,8         |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 2    | 25         | 6,9          | 3    | 28         | 8,0          | ...  | ...        | ...          | 4    | 26         | 5,7          |
| Infections specific to the perinatal period (P35-P39)   | 3    | 23         | 6,3          | 4    | 23         | 6,6          | 3    | 18         | 5,2          | 3    | 29         | 6,4          |
| Other disorders originating in the perinatal period (P90-P96)   | 4    | 17         | 4,7          | ...  | ...        | ...          | ...  | ...        | ...          | ...  | ...        | ...          |
| Congenital malformations of the circulatory system (Q20-Q28)  | 5    | 17         | 4,7          | 2    | 29         | 8,3          | 2    | 31         | 9,0          | 2    | 35         | 7,7          |
| Disorders related to length of gestation and fetal growth (P05-P08)   | ...  | ...        | ...          | 5    | 17         | 4,8          | ...  | ...        | ...          | 5    | 26         | 5,7          |
| Other forms of heart disease (I30-I52)  | ...  | ...        | ...          | ...  | ...        | ...          | 4    | 15         | 4,3          | ...  | ...        | ...          |
| Influenza and pneumonia (J09-J18)   | ...  | ...        | ...          | ...  | ...        | ...          | 5    | 15         | 4,3          | ...  | ...        | ...          |
|   |      |            |              |      |            |              |      |            |              |      |            |              |
| Other natural   |      | 210        | 57,7         |      | 175        | 49,9         |      | 172        | 49,9         |      | 209        | 46,0         |
| Non-natural   |      | 33         | 9,1          |      | 35         | 10,0         |      | 48         | 13,9         |      | 62         | 13,7         |
| <b>Total</b>  |      | <b>364</b> | <b>100,0</b> |      | <b>351</b> | <b>100,0</b> |      | <b>345</b> | <b>100,0</b> |      | <b>454</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014-2017

## 5.6 Causes of death by province

Table 5.8 to Table 5.16 present a four-year trend analysis for the top leading underlying natural causes of death for children under 5 years according by province. Most of the underlying natural causes are common in all the provinces and other underlying causes do not appear in the list of the top five leading natural causes of all the provinces for the year 2017.

### Western Cape

Table 5.8 presents results on a four-year trend (2014–2017) for the five leading causes of death among children under 5 years in the Western Cape. In 2017, *respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)* was the leading natural cause of death (9,8%), followed by *disorders related to length of gestation and fetal growth (7,5%)*, then *fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery* in third position (6,7%). *Other disorders originating in the perinatal period* ranked fourth position (4,9%) and *influenza and pneumonia* in fifth position (4,8%).

In terms of a trend, there was an increase in deaths from *disorders related to length of gestation and fetal growth* (6,4% to 7,5%) between 2014 and 2017. A decrease was observed in deaths from the following causes of death: *Respiratory and cardiovascular disorders specific to the perinatal period* (10,2% to 9,8%) and *other disorders originating in the perinatal period* (5,0% to 4,8%).

**Table 5.8: Top five leading natural causes of death among children under 5 years in Western Cape**

| Broad group of underlying causes  | Western Cape |              |              |      |              |              |      |              |              |      |              |              |
|---|--------------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017         |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank         | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1            | 132          | 9,8          | 1    | 196          | 9,6          | 1    | 221          | 9,6          | 1    | 232          | 10,2         |
| Disorders related to length of gestation and fetal growth (P05-P08)   | 2            | 101          | 7,5          | 2    | 145          | 7,1          | 2    | 163          | 7,1          | 3    | 145          | 6,4          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 3            | 90           | 6,7          | 3    | 123          | 6,0          | 5    | 119          | 5,2          | ...  | ...          | ...          |
| Other disorders originating in the perinatal period (P90-P96)   | 4            | 66           | 4,9          | 5    | 108          | 5,3          | 4    | 130          | 5,6          | 5    | 112          | 4,9          |
| Influenza and pneumonia (J09-J18)   | 5            | 65           | 4,8          | 4    | 118          | 5,8          | 3    | 134          | 5,8          | 4    | 113          | 5,0          |
| Intestinal infectious diseases (A00-A09)  | ...          | ...          | ...          | ...  | ...          | ...          | ...  | ...          | ...          | 2    | 188          | 8,3          |
| Other natural causes  |              | 801          | 59,2         |      | 1 184        | 57,8         |      | 1 363        | 59,1         |      | 1 307        | 57,6         |
| Non-natural causes  |              | 98           | 7,2          |      | 176          | 8,6          |      | 177          | 7,7          |      | 173          | 7,6          |
| <b>Total</b>  |              | <b>1 353</b> | <b>100,0</b> |      | <b>2 050</b> | <b>100,0</b> |      | <b>2 307</b> | <b>100,0</b> |      | <b>2 270</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017



## Eastern Cape

Table 5.9 presents results on a four-year trend (2014–2017) for the five leading causes of death among children under 5 years in the Eastern Cape. In 2017, *influenza and pneumonia (J09-J18)* was the leading cause of death (9,1%), followed by *intestinal infectious diseases (6,4%)*. *Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)* was the third leading cause of death (6,1%), then *malnutrition (4,1%)*, and *congenital malformations of the circulatory system (2,7%)*.

In terms of a trend, a decrease was observed in deaths from the following causes of death between 2014 and 2017: *influenza and pneumonia (9,4% to 9,1%)*, *intestinal infectious diseases (14,3% to 6,4%)* and *malnutrition (5,6% to 4,1%)*.

**Table 5.9: Top five leading natural causes of death among children under 5 years in Eastern Cape**

| Broad group of underlying causes  | Eastern Cape |              |              |      |              |              |      |              |              |      |              |              |
|---|--------------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017         |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank         | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Influenza and pneumonia (J09-J18)   | 1            | 185          | 9,1          | 1    | 279          | 10,0         | 1    | 320          | 9,6          | 2    | 363          | 9,4          |
| Intestinal infectious diseases (A00-A09)  | 2            | 130          | 6,4          | 2    | 188          | 6,7          | 2    | 294          | 8,8          | 1    | 555          | 14,3         |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 3            | 125          | 6,1          | 3    | 182          | 6,5          | 3    | 232          | 6,9          | 3    | 236          | 6,1          |
| Malnutrition (E40-E46)  | 4            | 83           | 4,1          | 4    | 133          | 4,8          | 4    | 174          | 5,2          | 4    | 216          | 5,6          |
| Congenital malformations of the circulatory system (Q20-Q28)                        | 5            | 55           | 2,7          | ...  | ...          | ...          | ...  | ...          | ...          | ...  | ...          | ...          |
| Other disorders originating in the perinatal period (P90-P96)                       | ...          | ...          | ...          | 5    | 92           | 3,3          | ...  | ...          | ...          | 5    | 112          | 2,9          |
| Disorders related to length of gestation and fetal growth (P05-P08)                 | ...          | ...          | ...          | ...  | ...          | ...          | 5    | 86           | 2,6          | ...  | ...          | ...          |
| Other natural causes  |              | 1 178        | 57,7         |      | 1 573        | 56,5         |      | 1 890        | 56,5         |      | 2 059        | 53,1         |
| Non-natural causes  |              | 286          | 14,0         |      | 339          | 12,2         |      | 352          | 10,5         |      | 335          | 8,6          |
| <b>Total</b>  |              | <b>2 042</b> | <b>100,0</b> |      | <b>2 786</b> | <b>100,0</b> |      | <b>3 348</b> | <b>100,0</b> |      | <b>3 876</b> | <b>100,0</b> |

Source: Mortality and causes of death 2014-2017

## Northern Cape

Table 5.10 below presents results on a four-year trend (2014-2017) for the five leading causes of death among children under 5 years in the Northern Cape. In 2017, the leading cause of death in Northern Cape was *respiratory and cardiovascular disorders specific to the perinatal period* (14,5%), followed by *intestinal infectious diseases* (8,8%), then *malnutrition* in third position (5,6%), *influenza and pneumonia* fourth position (7,3%) and *disorders related to length of gestation and fetal growth* (6,0%).

In terms of a trend, there was an increase in deaths from *respiratory and cardiovascular disorders specific to the perinatal period* (10,1% to 14,5%) and *disorders related to length of gestation and fetal growth* (5,4% to 6,0%) between 2014 and 2017. A decrease was observed in deaths from the following causes of death: *intestinal infectious diseases* (16,7% to 8,8%) and *influenza and pneumonia* (8,1% to 7,3%).

**Table 5.10: The top five leading natural causes of death among children under 5 years in Northern Cape**

| Broad group of underlying causes  | Northern Cape |            |              |      |              |              |      |              |              |      |              |              |
|---|---------------|------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017          |            |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank          | No         | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1             | 121        | 14,5         | 1    | 108          | 10,0         | 2    | 104          | 9,8          | 2    | 131          | 10,1         |
| Intestinal infectious diseases (A00-A09)  | 2             | 73         | 8,8          | 2    | 93           | 8,6          | 1    | 122          | 11,5         | 1    | 217          | 16,7         |
| Influenza and pneumonia (J09-J18)   | 3             | 61         | 7,3          | 4    | 82           | 7,6          | 3    | 80           | 7,5          | 3    | 105          | 8,1          |
| Disorders related to length of gestation and fetal growth (P05-P08)                 | 4             | 50         | 6,0          | 5    | 70           | 6,5          | 4    | 71           | 6,7          | 5    | 70           | 5,4          |
| Malnutrition (E40-E46)  | 5             | 47         | 5,6          | 3    | 89           | 8,2          | 5    | 70           | 6,6          | 4    | 84           | 6,5          |
| Other natural causes  |               | 423        | 50,8         |      | 559          | 51,5         |      | 537          | 50,7         |      | 583          | 44,9         |
| Non-natural causes  |               | 58         | 7,0          |      | 84           | 7,7          |      | 76           | 7,2          |      | 108          | 8,3          |
| <b>Total</b>  |               | <b>833</b> | <b>100,0</b> |      | <b>1 085</b> | <b>100,0</b> |      | <b>1 060</b> | <b>100,0</b> |      | <b>1 298</b> | <b>100,0</b> |

Source: Mortality and causes of death 2014-2017

## Free State

Table 5.11 below presents results on a four-year trend (2014-2017) for the five leading causes of death among children under 5 years in the Free State. In 2017, *respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)* was the leading cause of death (14,4%), then *influenza and pneumonia* in second place (8,7%), then *intestinal infectious diseases* (6,3%) and *malnutrition* in third position (6,3%), and *fetus and newborn affected by maternal factors and complications of pregnancy, labour and delivery* (5,2%).

Trend analysis between 2014 and 2017 show that an increase was observed on deaths from *respiratory and cardiovascular disorders specific to the perinatal period* (12,2% to 14,4%) and a decrease on deaths from the following causes of death: *influenza and pneumonia* (11,0% to 8,7%), *intestinal infectious diseases* (14,9% to 6,3%), and *malnutrition* (7,7% to 6,3%).

**Table 5.11: The top five leading natural causes of death among children under 5 years in Free State**

| Broad group of underlying causes  | Free State |              |              |      |              |              |      |              |              |      |              |              |
|---|------------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017       |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank       | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1          | 247          | 14,4         | 1    | 266          | 12,2         | 1    | 314          | 13,2         | 2    | 324          | 12,2         |
| Influenza and pneumonia (J09-J18)   | 2          | 150          | 8,7          | 2    | 238          | 11,0         | 3    | 233          | 9,8          | 3    | 293          | 11,0         |
| Intestinal infectious diseases (A00-A09)  | 3          | 108          | 6,3          | 4    | 154          | 7,1          | 2    | 270          | 11,4         | 1    | 394          | 14,9         |
| Malnutrition (E40-E46)  | 4          | 108          | 6,3          | 3    | 157          | 7,2          | 4    | 198          | 8,3          | 4    | 205          | 7,7          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 5          | 89           | 5,2          | 5    | 101          | 4,7          | ...  | ...          | ...          | ...  | ...          | ...          |
| Disorders related to length of gestation and fetal growth (P05-P08)   | ...        | ...          | ...          | ...  | ...          | ...          | 5    | 93           | 3,9          | ...  | ...          | ...          |
| Infections specific to the perinatal period (P35-P39)   | ...        | ...          | ...          | ...  | ...          | ...          | ...  | ...          | ...          | 5    | 105          | 4,0          |
| Other natural causes  |            | 904          | 52,6         | 0    | 1 111        | 51,2         | 0    | 1 089        | 45,8         | 0    | 1 160        | 43,7         |
| Non-natural causes  |            | 113          | 6,6          |      | 145          | 6,7          |      | 179          | 7,5          |      | 171          | 6,4          |
| <b>Total</b>  |            | <b>1 719</b> | <b>100,0</b> |      | <b>2 172</b> | <b>100,0</b> |      | <b>2 376</b> | <b>100,0</b> |      | <b>2 652</b> | <b>100,0</b> |

Mortality and causes of death, 2014-2017

## KwaZulu-Natal

Table 5.12 below presents results on a four-year trend (2014-2017) for the five leading causes of death among children under 5 years in KwaZulu-Natal. In 2017, *respiratory and cardiovascular disorders specific to the perinatal period* was the leading cause of deaths (11,4%), followed by *influenza and pneumonia* (8,6%) and *disorders related to length of gestation and fetal growth* in third position (6,8%). *Intestinal infectious diseases* fourth position at 5,6% and *infections specific to the perinatal period* at 4,9%.

A trend between 2014 and 2017 show that a decrease was recorded for deaths from the following causes of death: *respiratory and cardiovascular disorders specific to the perinatal period* (11,6% to 11,4%) and *intestinal infectious diseases* (14,0% to 5,6%). An increase was highlighted for deaths from *influenza and pneumonia* (7,3% to 8,6%) and *disorders related to length of gestation and fetal growth* (5,4% to 6,8%).

**Table 5.12: The top five leading natural causes of death among children under 5 years in KwaZulu-Natal**

| Broad group of underlying causes  | KwaZulu-Natal |              |              |      |              |              |      |              |              |      |              |              |
|---|---------------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017          |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank          | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1             | 175          | 11,4         | 1    | 497          | 11,0         | 1    | 673          | 11,6         | 2    | 732          | 11,6         |
| Influenza and pneumonia (J09-J18)   | 2             | 132          | 8,6          | 3    | 313          | 6,9          | 3    | 425          | 7,4          | 3    | 459          | 7,3          |
| Disorders related to length of gestation and fetal growth (P05-P08)   | 3             | 105          | 6,8          | 4    | 240          | 5,3          | 4    | 364          | 6,3          | 4    | 341          | 5,4          |
| Intestinal infectious diseases (A00-A09)  | 4             | 87           | 5,6          | 2    | 322          | 7,1          | 2    | 600          | 10,4         | 1    | 884          | 14,0         |
| Infections specific to the perinatal period (P35-P39)   | 5             | 75           | 4,9          | ...  | ...          | ...          | ...  | ...          | ...          | ...  | ...          | ...          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | ...           | ...          | ...          | 5    | 211          | 4,7          | ...  | ...          | ...          | ...  | ...          | ...          |
| Malnutrition (E40-E46)  | ...           | ...          | ...          | ...  | ...          | ...          | 5    | 284          | 4,9          | 5    | 289          | 4,6          |
| Other natural causes  |               | 832          | 54,0         |      | 2 464        | 54,6         |      | 2 923        | 50,6         |      | 3 072        | 48,7         |
| Non-natural causes  |               | 135          | 8,8          |      | 466          | 10,3         |      | 513          | 8,9          |      | 535          | 8,5          |
| <b>Total</b>  |               | <b>1 541</b> | <b>100,0</b> |      | <b>4 513</b> | <b>100,0</b> |      | <b>5 782</b> | <b>100,0</b> |      | <b>6 312</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017

## North West

Table 5.13 below presents results on a four-year trend (2014–2017) for the five leading causes of death among children under 5 years in the North West. In 2017, *respiratory and cardiovascular disorders specific to the perinatal period* (11,6%) was the leading cause of deaths, followed by *intestinal infectious diseases* (9,1%), *Influenza and pneumonia* (9,1%) then *malnutrition* in fourth position at 7,6% and *infections specific to the perinatal period* in fifth position at 4,6%.

Trend analysis between 2014 and 2017 show an increase for deaths from *respiratory and cardiovascular disorders specific to the perinatal period* (10,9% to 11,6%) and *influenza and pneumonia* (7,8% to 9,1%). A decrease was also seen for deaths from *intestinal infectious diseases* (19,3% to 9,1%) and *malnutrition* (7,9% to 7,1%).

**Table 5.13: The top five leading natural causes of death among children under 5 years in North West**

| Broad group of underlying causes  | North West |              |              |      |              |              |      |              |              |      |              |              |
|---|------------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017       |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank       | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1          | 192          | 11,6         | 1    | 348          | 11,4         | 1    | 408          | 12,3         | 2    | 401          | 10,9         |
| Intestinal infectious diseases (A00-A09)  | 2          | 151          | 9,1          | 2    | 312          | 10,2         | 2    | 406          | 12,2         | 1    | 714          | 19,3         |
| Influenza and pneumonia (J09-J18)   | 3          | 150          | 9,1          | 3    | 267          | 8,8          | 3    | 266          | 8,0          | 4    | 290          | 7,8          |
| Malnutrition (E40-E46)  | 4          | 126          | 7,6          | 4    | 224          | 7,4          | 4    | 197          | 5,9          | 3    | 292          | 7,9          |
| Infections specific to the perinatal period (P35-P39)                               | 5          | 76           | 4,6          | ...  | ...          | ...          | ...  | ...          | ...          | ...  | ...          | ...          |
| Other disorders originating in the perinatal period (P90-P96)                       | ...        | ...          | ...          | 5    | 144          | 4,7          | 5    | 189          | 5,7          | 5    | 145          | 3,9          |
| Other natural causes  |            | 878          | 53,0         |      | 1 557        | 51,1         |      | 1 677        | 50,4         |      | 1 644        | 44,5         |
| Non-natural causes  |            | 83           | 5,0          |      | 195          | 6,4          |      | 184          | 5,5          |      | 209          | 5,7          |
| <b>Total</b>  |            | <b>1 656</b> | <b>100,0</b> |      | <b>3 047</b> | <b>100,0</b> |      | <b>3 327</b> | <b>100,0</b> |      | <b>3 695</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017

## Gauteng

Table 5.14 below presents results on a four-year trend (2014–2017) for the five leading causes of death among children under 5 years in Gauteng. In 2017, *respiratory and cardiovascular disorders specific to the perinatal period* was ranked number 1 (12,9%), followed by *influenza and pneumonia* (7,3%), then *infections specific to the perinatal period* (6,8%). *Other disorders originating in the perinatal period* was fourth at 5,1% and *intestinal infectious diseases* (4,7%)

Trend analysis between 2014 and 2017 show an increase for deaths from *infections specific to the perinatal period* (5,8% to 6,8%) and *other disorders originating in the perinatal period* (4,8% to 5,1%). A decrease was also seen for deaths from *intestinal infectious diseases* (8,0% to 4,7%) and *respiratory and cardiovascular disorders specific to the perinatal period* (13,8% to 12,9%).

**Table 5.14: The top five natural natural causes of death among children under 5 years in Gauteng**

| Broad group of underlying causes  | Gauteng |              |              |      |              |              |      |              |              |      |              |              |
|---|---------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017    |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank    | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) | 1       | 610          | 12,9         | 1    | 869          | 13,2         | 1    | 1065         | 15,1         | 1    | 1030         | 13,8         |
| Influenza and pneumonia (J09-J18)   | 2       | 346          | 7,3          | 3    | 396          | 6,0          | 3    | 407          | 5,8          | 3    | 545          | 7,3          |
| Infections specific to the perinatal period (P35-P39)                               | 3       | 322          | 6,8          | 2    | 463          | 7,1          | 4    | 381          | 5,4          | 4    | 432          | 5,8          |
| Other disorders originating in the perinatal period (P90-P96)                       | 4       | 240          | 5,1          | 4    | 388          | 5,9          | 5    | 363          | 5,1          | 5    | 361          | 4,8          |
| Intestinal infectious diseases (A00-A09)  | 5       | 222          | 4,7          | 5    | 280          | 4,3          | 2    | 454          | 6,4          | 2    | 596          | 8,0          |
| Other natural causes  |         | 2 603        | 54,9         |      | 3 627        | 55,2         |      | 3 821        | 54,1         |      | 4 020        | 53,7         |
| Non-natural causes  |         | 399          | 8,4          |      | 543          | 8,3          |      | 569          | 8,1          |      | 499          | 6,7          |
| <b>Total</b>  |         | <b>4 742</b> | <b>100,0</b> |      | <b>6 566</b> | <b>100,0</b> |      | <b>7 060</b> | <b>100,0</b> |      | <b>7 483</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017

## Mpumalanga

Table 5.15 presents results on a four-year trend (2014–2017) for the five natural leading causes of death among children under 5 years in Mpumalanga. In 2017, the leading cause of death in Mpumalanga was *respiratory and cardiovascular disorders specific to the perinatal period* (14,6%), while *intestinal infectious diseases (A00-A09)* was second (9,4%), *influenza and pneumonia* third position (7,5%). *Disorders related to length of gestation and fetal growth* was fourth at 4,5% and then *other disorders originating in the perinatal period* at 4,2%.

A trend between 2014 and 2017 show an increase in deaths from *respiratory and cardiovascular disorders specific to the perinatal period* and *other disorders originating in the perinatal period*, while a decrease was observed for deaths from *intestinal infectious diseases* and *influenza and pneumonia*.

**Table 5.15: The top five leading natural causes of death among children under 5 years in Mpumalanga**

| Broad group of underlying causes  | Mpumalanga |              |              |      |              |              |      |              |              |      |              |              |
|---|------------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017       |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank       | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 1          | 214          | 14,6         | 1    | 286          | 12,3         | 2    | 310          | 11,6         | 3    | 285          | 10,0         |
| Intestinal infectious diseases (A00-A09)  | 2          | 138          | 9,4          | 2    | 256          | 11,0         | 1    | 406          | 15,3         | 1    | 544          | 19,0         |
| Influenza and pneumonia (J09-J18)   | 3          | 109          | 7,5          | 3    | 220          | 9,5          | 3    | 255          | 9,6          | 2    | 309          | 10,8         |
| Disorders related to length of gestation and fetal growth (P05-P08)   | 4          | 66           | 4,5          | ...  | ...          | ...          | 5    | 105          | 3,9          | ...  | ...          | ...          |
| Other disorders originating in the perinatal period (P90-P96)   | 5          | 62           | 4,2          | 4    | 78           | 3,4          | ...  | ...          | ...          | 5    | 92           | 3,2          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | ...        | ...          | ...          | 5    | 77           | 3,3          | ...  | ...          | ...          | ...  | ...          | ...          |
| Malnutrition (E40-E46)  | ...        | ...          | ...          | ...  | ...          | ...          | 4    | 155          | 5,8          | 4    | 147          | 5,1          |
| Other natural causes  |            | 726          | 49,7         |      | 1 202        | 51,9         |      | 1 234        | 46,4         |      | 1 248        | 43,7         |
| Non-natural causes  |            | 146          | 10,0         |      | 198          | 8,5          |      | 196          | 7,4          |      | 234          | 8,2          |
| <b>Total</b>  |            | <b>1 461</b> | <b>100,0</b> |      | <b>2 317</b> | <b>100,0</b> |      | <b>2 661</b> | <b>100,0</b> |      | <b>2 859</b> | <b>100,0</b> |

Mortality and causes of death, 2014-2017

## Limpopo

Table 5.16 presents results on a four-year trend (2014–2017) for the five leading natural causes of death among children under 5 years in Limpopo. In 2017, the leading cause of death was *influenza and pneumonia* (11,8%) while *respiratory and cardiovascular disorders specific to the perinatal period* was second (10,4%). *Intestinal infectious diseases* was third (7,6%). *Other disorders originating in the perinatal period* in fourth position (4,6%) and *fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery* (4,4%).

Deaths from *other disorders originating in the perinatal period (P90-P96)* showed an upward direction, increasing from 3,1% in 2014 to 4,6% in 2017. There was no clear trend in deaths from the *respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)*.

**Table 5.16: The top five leading natural causes of death among children under 5 years in Limpopo 2014–2018**

| Broad group of underlying causes  | Limpopo |              |              |      |              |              |      |              |              |      |              |              |
|---|---------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|------|--------------|--------------|
|   | 2017    |              |              | 2016 |              |              | 2015 |              |              | 2014 |              |              |
|   | Rank    | No           | %            | Rank | No           | %            | Rank | No           | %            | Rank | No           | %            |
| Influenza and pneumonia (J09-J18)   | 1       | 214          | 11,8         | 1    | 487          | 13,1         | 2    | 608          | 13,4         | 2    | 667          | 14,4         |
| Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)                             | 2       | 188          | 10,4         | 2    | 407          | 11,0         | 3    | 514          | 11,4         | 3    | 414          | 8,9          |
| Intestinal infectious diseases (A00-A09)  | 3       | 138          | 7,6          | 3    | 362          | 9,8          | 1    | 611          | 13,5         | 1    | 759          | 16,3         |
| Other disorders originating in the perinatal period (P90-P96)   | 4       | 84           | 4,6          | 5    | 137          | 3,7          | 5    | 152          | 3,4          | 5    | 145          | 3,1          |
| Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00-P04) | 5       | 79           | 4,4          | ...  | ...          | ...          | ...  | ...          | ...          | ...  | ...          | ...          |
| Malnutrition (E40-E46)  | ...     | ...          | ...          | 4    | 172          | 4,6          | 4    | 263          | 5,8          | 4    | 213          | 4,6          |
| Other natural causes  |         | 1 004        | 55,3         |      | 1 875        | 50,6         |      | 2 068        | 45,7         |      | 2 121        | 45,7         |
| Non-natural causes  |         | 108          | 6,0          |      | 267          | 7,2          |      | 309          | 6,8          |      | 326          | 7,0          |
| <b>Total</b>  |         | <b>1 815</b> | <b>100,0</b> |      | <b>3 707</b> | <b>100,0</b> |      | <b>4 525</b> | <b>100,0</b> |      | <b>4 645</b> | <b>100,0</b> |

Source: Mortality and causes of death, 2014–2017



## 5.7 Comparison between provinces

The underlying natural causes that are common in the provinces are; *respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)*; *Influenza and Pneumonia (J09- J18)*; and *Intestinal infectious diseases (A00-A09)*. In 2014, *intestinal infectious diseases (A00-A09)* was ranked number 1 in seven provinces and ranked 2 in other two provinces, namely, Gauteng and Western Cape.

In 2017, *respiratory and cardiovascular disorders specific to the perinatal period (P20-P29)* was ranked number 1 in the following provinces: Western Cape, Northern Cape, Free State, KwaZulu-Natal, North West, Gauteng and Mpumalanga; ranked number 3 in the Eastern Cape province; and ranked number 3 in Limpopo.

In 2016 and 2017, *intestinal infectious diseases (A00-A09)* was ranked 2 in the following provinces: Mpumalanga, North West, Northern Cape and Eastern Cape. *Intestinal infectious diseases (A00-A09)* was not one of the top leading natural causes of death in Western Cape in 2017 but in 2014 it was ranked as number 2 leading cause of natural death.

The ranking of *influenza and pneumonia (J09-J18)* differs from one province to the other. In Eastern Cape and Limpopo, *influenza and pneumonia (J09-J18)* was ranked as the leading causes of death of children under 5 for the years 2017, 2016 and in 2015 it was ranked number 1 in Eastern Cape. Furthermore, *influenza and pneumonia (J09-J18)* was ranked number 2 in 2017 in the following provinces: Gauteng, KwaZulu-Natal and Free State. In Northern Cape, Mpumalanga and North West provinces, *influenza and pneumonia (J09-J18)* was ranked number and ranked as number 5 in Western Cape.

In 2017, *malnutrition (E40-E49)* was ranked number 4 for the following provinces: Eastern Cape, Free State and North West whereas ranked number 5 in Northern Cape. For all other provinces *malnutrition (E40-E49)* was not amongst the top five leading underlying natural causes of death in 2017 but it was ranked amongst the top 5 as an underlying natural causes of death for other years (2016, 2015, 2014). Gauteng and Western Cape never experienced the occurrence of *malnutrition (E40-E46)* as an underlying natural cause of death for children under 5 years during this four trend. In the Eastern Cape, *malnutrition (E40-E46)* has been ranked number 4 for children under 5 years during this four year trend whilst in North West, *malnutrition (E40-E49)* was ranked 4 in 2017, 2016 and 2015 and ranked no 3 in 2014.

*Other disorders originating in the perinatal period (P90-P96)* was ranked number 4 as the underlying natural causes of death for the Western Cape, Gauteng, and Limpopo in 2017. Three provinces, namely, Northern Cape, Free State and KwaZulu-Natal never experienced the occurrences of *other disorders originating in the perinatal period (P90-P96)* as being in the top 5 of an underlying natural cause of death in this four year trend whereas in the other provinces, *other disorders originating in the perinatal period (P90-P96)*, was either ranked 4 or 5 in this four-year trend.

## Concluding remarks

Results from this report highlight that there was no improvement in the percentage of households with safe drinking water between 2014 and 2018. In all the provinces, 90% of households with children under 5 years reported that they have safe drinking water with the exception of Eastern Cape, where the percentages were 70% or less for all the years.

Nationally, there was a steady increase in households with improved sanitation. Limpopo had less than 60% of households that reported improved sanitation while Western Cape and Gauteng had above 90% of households that reported improved sanitation. Western Cape is the only province with a decrease in this regard.

There was a national decrease in children with low birth weight. Northern Cape exhibited higher percentages above other provinces. Western Cape, KwaZulu-Natal and North West showed decreases in the percentage of children with low birth weight.

Information on breastfeeding showed that half of the children have been exclusively breastfed. Free State showed a high percentage (above 80%) of children who were exclusively breastfed in 2014. There was a decrease observable in Free State, Mpumalanga and Limpopo.

Data on causes of death highlighted that the leading natural cause of death between 2015 to 2017 was *respiratory and cardiovascular disorders specific to the perinatal period* for all population groups, males and females and all provinces with the exception of Eastern Cape and Limpopo.

Provincial trend analysis show that leading natural cause of death decreased in the following provinces: Western Cape, Eastern Cape, Gauteng and Limpopo, while an increase was seen in Northern Cape, Free State, KwaZulu-Natal, North West and Mpumalanga.

## REFERENCES

- Abdraboh Mirvat Hassan. (2016, September 03). *www.iugaza.edu.ps*. Retrieved from *www.iugaza.edu.ps*: <https://library.iugaza.edu.ps/thesis/119988.pdf>
- Aheto, J. M. (2019, January 16). <https://bmcpublichealth.biomedcentral.com/>. Retrieved from *bmcpublichealth*: <https://doi.org/10.1186/s12889-019-6390-4>
- Arora, A. S. (2016, November 01). Population Well-Being Measures Help Explain Geographic Disparities In Life Expectancy At The County Level. *Health Aff (Millwood)* Author manuscript; available in PMC 2017 January 01., 35(11): 2075–2082.
- Cohen, B., & Menken, J. (2006). *Aging in Sub-Saharan Africa*. National Academies Press.
- Guy, H., & Chase, C. (2017). Chapter 9 : Water Supply, Sanitation, and Hygiene. In R. N. Charles N. Mock, *Injury Prevention and Environmental Health, 3rd edition* (pp. 171-198). Washington (DC): Worldbank.
- Haal, K., Smith, A., & van Doorsaler, E. (2018). The rise and fall of mortality inequality in South Africa in the HIV era. *Population Health*, 239- 248.
- Hall, K., & Nannan Nadine and Sambu, W. (2017). *Child\_Gauge\_2017-Child\_Health.pdf*. Retrieved from University of Cape Town: [www. childrencount.uct.ac.za](http://www.childrencount.uct.ac.za)
- Human Development. (2013). *UNDP, Beyond Scarcity: Power, poverty and the global water crisis. 2006*.
- IFPRI. (2014). *2014 Global Hunger index: The challenge of hidden hunger*. Dublin: International Food Policy Research Institute.
- SAHRC. (2014). *Report on the Right to Access Sufficient Water and Decent Sanitation in South Africa: 2014*. South African Human Rights Commission.
- Statistics, S. A. (2016). *Perinatal deaths in South Africa 2014*. Pretoria: Statistics South Africa.
- StatisticsSouthAfrica. (2019). *Mid Year Estimates*. Pretoria: Statistics South Africa.
- StatisticsSouthAfrica. (2019). *Sustainable Development Goals: Country Report, 2019*. Pretoria: Statistics South Africa.
- UNDESA. (2011). *World Population Policies*.
- UNDESA. (2014, May 16). <http://www.unwaterlibrary.org/>. Retrieved from UNDESA: <https://www.un.org/waterforlifedecade/africa.shtml>
- UNESCO. (2015, March). <https://www.unilever.com/>. Retrieved from Unilever : [https://www.unilever.com/Images/slp\\_water-for-women-march-2015\\_tcm244-423659\\_en.pdf](https://www.unilever.com/Images/slp_water-for-women-march-2015_tcm244-423659_en.pdf)
- UNICEF. (2016). *Strategy for Health 2016-2030*. New York: UNICEF.
- UNICEF. (2018). *Progress for every child in the SDG Era*. New York: UNICEF.
- UNICEF, WHO, WBG, & UN, a. (2019). *Levels and Trends in Child Mortality*. New York: UNICEF.
- Unilever. (2015, March ). Retrieved from Unilever .com: [unilever.com/Images.slp\\_water-for-women-March-2015\\_tcm244-423659\\_en.pdf](http://unilever.com/Images.slp_water-for-women-March-2015_tcm244-423659_en.pdf)
- United Nations. (2019, June 14). *SOUTH AFRICA'S IMPLEMENTATION OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT*. Retrieved from <https://sustainabledevelopment.un.org/content/documents/2340>: <https://sustainabledevelopment.un.org/content/documents/2340>
- UNWFP. (2006). *World Hunger Series 2006: Hunger and learning*. Rome: World Food Programme.

- Victoria Kenny S. (2019, April 06). *The role of Agriculture sector performance on economic growth in Nigeria*. Retrieved from Munich Personal RePEc Archive: [https://mpra.ub.uni-muenchen.de/93132/1/MPRA\\_paper\\_93132.pdf](https://mpra.ub.uni-muenchen.de/93132/1/MPRA_paper_93132.pdf)
- Wenhold Friedeburg, & F. (2008, October). *wrc. org.za*. Retrieved from [wrc.org.za](http://www.health.uct.ac.za/sites/default/files/image_tool/images/91): [http://www.health.uct.ac.za/sites/default/files/image\\_tool/images/91](http://www.health.uct.ac.za/sites/default/files/image_tool/images/91)
- WFP. (2002). *World Food Programme : Annual Report 2002*. Rome: World Food Programme.
- WHO. (2011). *WHO Guidelines on preventing early pregnancy and poor reproductive outcomes amongst adolescent in developing countries*. Geneva: WHO.
- www.statssa.gov.za. (2019, September 26). *Recorded Live Births: 2018*. Retrieved from Statistics South Africa: [www.statssa.gov.za](http://www.statssa.gov.za)

