Western Cape Government

Health

BURDEN OF DISEASE

INTRODUCTION

The Western Cape Burden of Disease Reduction project was released in 2008. This project looked at the state of wellness and ill health in the province. The project also identified possible upstream interventions to prevent and reduce the burden of ill health in the Western Cape.

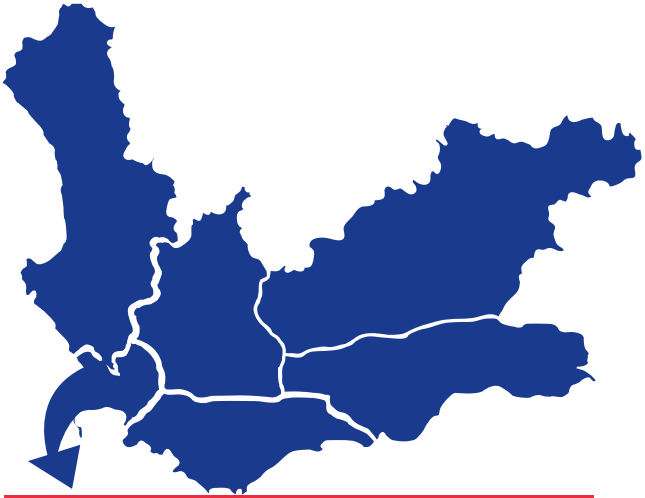
The interventions focused on risks for the five main causes of ill health:

1. Infectious diseases, including HIV/AIDS and tuberculosis
2. Mental health conditions
3. Injuries, including road traffic injuries and violence-related injuries
4. Cardiovascular diseases
5. Childhood diseases

This 2019 update is a rapid review of the progress made since 2008 to address the burden of ill health, the distribution of social determinants, and selected interventions implemented in the Western Cape since the 2008 Burden of Disease Reduction project.

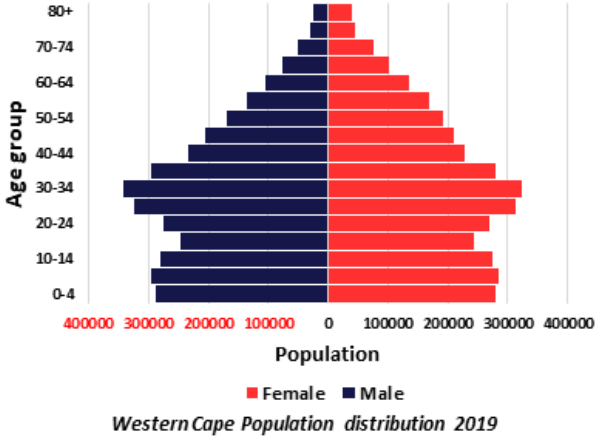
OVERVIEW

The Western Cape population grew by 23% from 2009 to 2019. Two-thirds of the population live in Cape Town. Hence most early deaths are in the Metro.



The Western Cape includes 6 districts. Each district is made up of sub-districts. The Cape Town Metro has 8 health sub-districts.

The number of people living in the Western Cape increased from from 5.5 million in 2009 to nearly 7 million in 2019. The increase is seen across all ages in men and women, but especially in those 20-35 years of age.



Western Cape Population distribution 2019

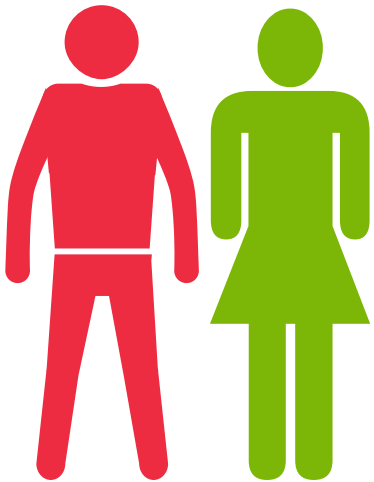
From 2009 to 2016, the rate of early deaths decreased by 17%.

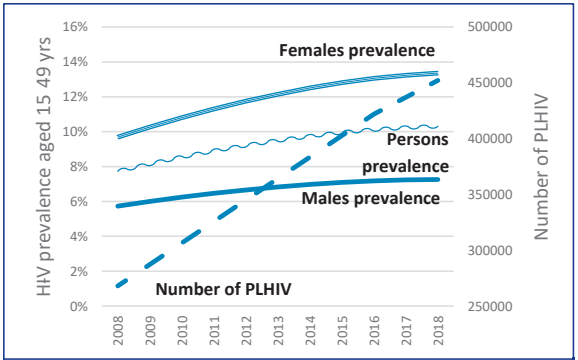
This league table shows the change in ranking of conditions causing early deaths from 2009 to 2016 overall, and for men and women. The ranking is based on the percent of all early deaths from each condition.

In men, intentional injuries have become the leading cause of early death. HIV/AIDS & TB remains the leading cause of early death in women and overall.

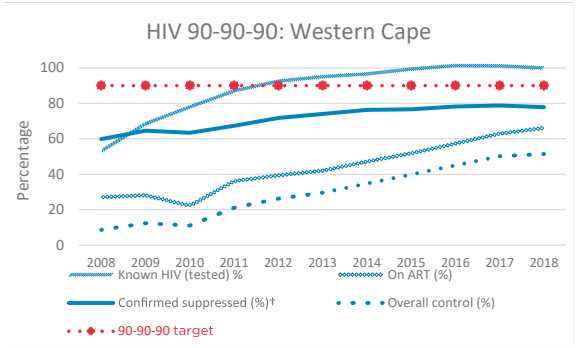
Rank	Persons		Men		Women	
	2009	2016	2009	2016	2009	2016
1	HIV/AIDS & TB 24.6	HIV/AIDS & TB 18.6	HIV/AIDS & TB 23.0	Int. injuries 20.5	HIV/AIDS & TB 26.6	HIV/AIDS & TB 20.4
2	Cardiovascular 14.7	Cancers 15.9	Int. injuries 14.4	HIV/AIDS & TB 17.2	Cardiovascular 16.7	Cancers 18.8
3	Cancers 13.9	Other NCDs 14.9	Cardiovascular 13.1	Cancers 13.8	Cancers 15.7	Other NCDs 16.3
4	Other NCDs 12.0	Cardiovascular 14.0	Cancers 12.5	Other NCDs 13.8	Other NCDs 12.3	Cardiovascular 16.3
5	Int. injuries 9.7	Int. injuries 13.5	Other NCDs 11.7	Cardiovascular 12.3	Inf/para 10.1	Diabetes 8.9
6	Inf/para 9.0	Unint. injuries 8.8	Unint. injuries 10.5	Unint. injuries 10.9	Diabetes 5.8	Inf/para 6.0
7	Unint. injuries 8.2	Diabetes 6.2	Inf/para 8.1	Inf/para 4.4	Unint. injuries 5.2	Unint. injuries 6.0
8	Diabetes 4.3	Inf/para 5.1	Mat/Peri/Nutr 3.4	Diabetes 4.3	Mat/Peri/Nutr 4.0	Int. injuries 3.7
9	Mat/Peri/Nutr 3.7	Mat/Peri/Nutr 3.1	Diabetes 3.1	Mat/Peri/Nutr 2.7	Int. injuries 3.5	Mat/Peri/Nutr 3.6

NCDs: non-communicable diseases; Int. injuries: intentional injuries; Unint. injuries: unintentional injuries; Inf/para: infectious/parasitic diseases; Mat/Peri/Nutr: maternal, perinatal and nutritional conditions





People living with HIV (PLHIV): The Thembisa model estimates ~450,000 PLHIV in the Western Cape in 2018. This includes ~13,000 children <15 years of age.

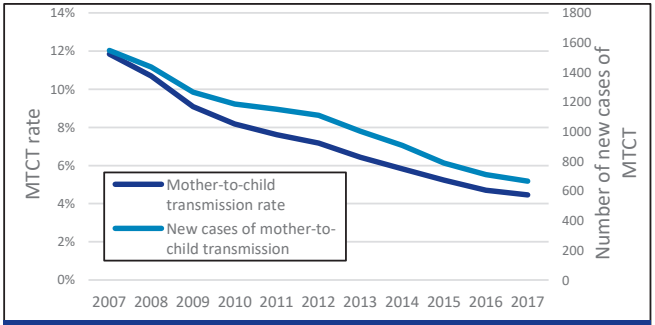


About 10% of 15-49 year olds are living with HIV.

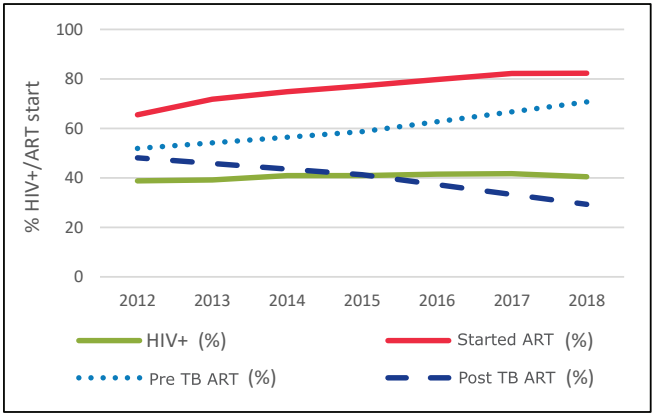
HIV prevalence in women is nearly double that in men (13.4% vs 7.3%).

UNAIDS 2020 targets:
90% of PLHIV know their status
90% of diagnosed PLHIV receive antiretroviral therapy (ART)
90% of those on ART have viral suppression.

The Western Cape has exceeded the first 90, but must still meet the second and third 90.



Mother to child transmission (MTCT): 3.4% of children of HIV+ mothers acquired HIV during pregnancy, labour, delivery or breastfeeding in 2018.



Mother to child HIV transmission decreased by nearly 75% in the last 10 years.

However, there are still an estimated >600 new cases of mother to child transmission each year.

Tuberculosis:

In 2018, there were ~56,000 new TB cases. New TB cases have decreased ~9% from 2012 vs. 2018.
In 2018: 35% of TB cases were for retreatment, 11.5% were extra-pulmonary TB, ~5% drug-resistant TB,
~40% of TB patients are also PLHIV.

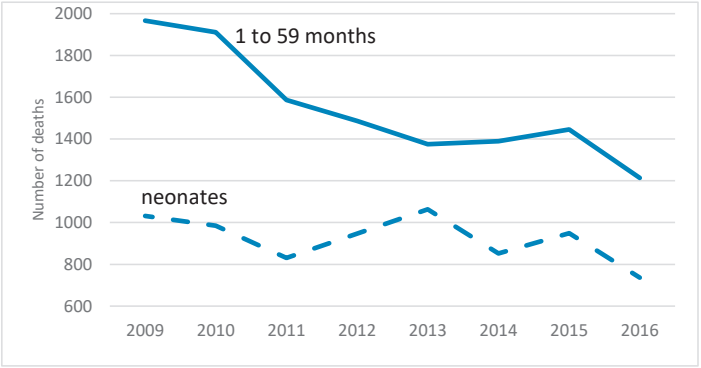
Interventions

- Improved testing for HIV/TB
- PMTCT programme
- TB prevention for all PLHIV
- ART to all PLHIV regardless of CD4 count
- Adherence clubs
- Improved TB screening
- Improved drugs

Challenges

- Maintaining PLHIV/TB in care
- Integrating TB and HIV care (previously disease specific programmes)
- Slow uptake of voluntary medical male circumcision
- Stigma and discrimination

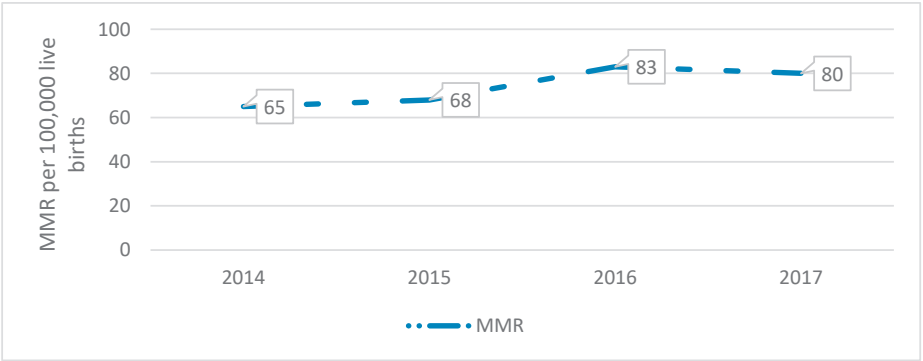
The under 5 mortality rate dropped by 44% and the absolute number of deaths in children under 5 years by 38% from 2009 to 2016. The biggest drops were in deaths due to HIV/AIDS, diarrhoea and malnutrition.



The number of newborn deaths (infants aged 0-27 days) decreased by 29% from 2009 to 2016. Most causes of newborn death reduced by ~30%, while **newborn deaths from severe infections dropped by 48%.**

Maternal morbidity & mortality: Western Cape is close to the 2030 SDG of maternal mortality ratio (MMR) < 70/100,000 live births. In 2017, the Western Cape had a MMR of 80/100,000).

The main challenge is bleeding during and after delivery.



FIRST 1000 days

Right Start. Bright Future.

The 1st 1000 days of life provides one of the most significant opportunities within Health to address upstream determinants of the burden of ill health.

It focusses on a **life course approach** and includes pregnant women, which should ultimately improve immediate and long term health outcomes for mothers and infants.

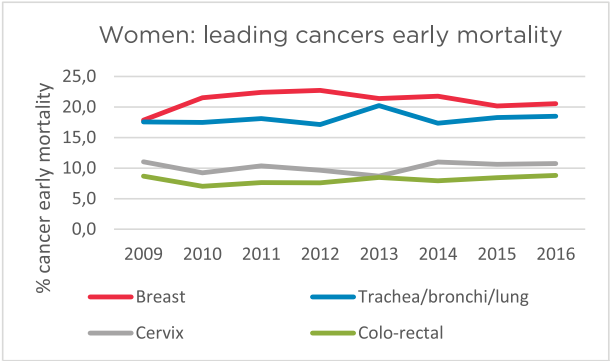
Interventions

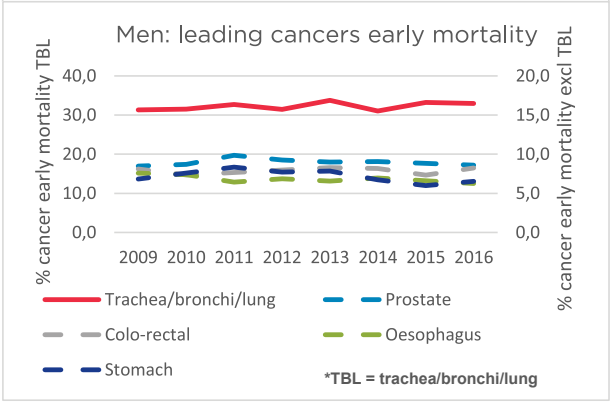
- First 1000 days: Apex priority for the Western Cape Government
- Point-of-care Doppler ultrasound research and roll-out to reduce stillbirths

Challenges

- Shortage of skilled staff; continued training of staff to ensure high quality of care
- Access to emergency maternity theatres; long waiting times for caesarean sections

The proportion of early mortality due to cardiovascular diseases, cancers, diabetes and other non-communicable diseases (NCDs) has increased by nearly 14% from 2009 to 2016.



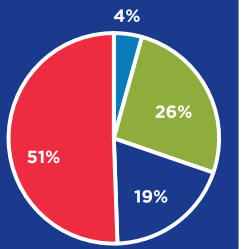


Cancer: Breast cancer remains the leading cause of early mortality from cancer among women, while for men it is lung cancer.

Diabetes: Surveys show wide variation in the prevalence of common NCDs, limiting the ability to estimate the true burden of people living with NCDs in the province. Estimates using available data shows that ~18,000 people (60% women) are starting diabetes treatment pear year. Most diabetic patients are 40-65 years old (58%); nearly 1/3 are >65 years old.

Control of diabetes is poor. **70% of patients have an HbA1c > 8% indicating poor disease control.**

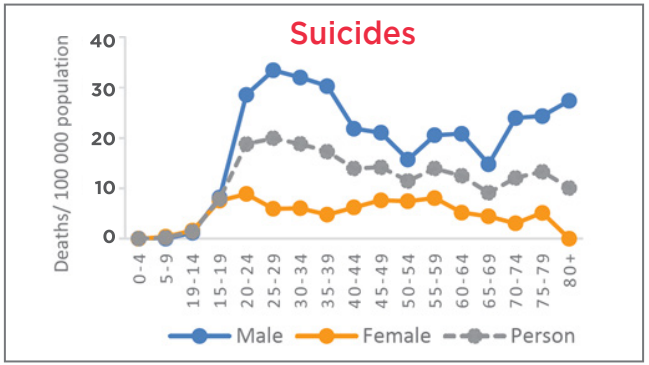
- last HbA1c normal: <= 6%
- last HbA1c controlled: 6-8%
- last HbA1c poor control: 8-10%
- last HbA1c uncontrolled: >10%



The Western Cape has the highest 12-month and lifetime prevalence of mental illness in South Africa (39%). Source: 2004 South African Stress and Health Survey

Mental Health: Estimating the burden of mental health conditions is extremely challenging as mental ill health is associated more with morbidity than with mortality.

Suicide may be a proxy for mental illness burden as ~90% of people who commit suicide have a mental health condition at the time of death, but suicide grossly underestimates underlying mental disorders. In the Western Cape, suicides were 11% of injury deaths (1.5% all deaths). The age-standardised mortality rate for suicide was 3 times higher in men vs. women, with the age most affected being 20-39 year olds.



Interventions

- Western Cape on Wellness (WoW!)
- Sodium content reduction (certain foods)
- Sugar sweetened beverage tax
- Integrated school health policy
- Integrated counselling strategy
- Assertive Community Treatment teams (ACT) for mental health

Challenges

- WoW! retention and lack of resources (venues, equipment, administration)
- Sugar sweetened beverage tax 11% instead of 20%, so estimated reductions in diabetes and diabetes health costs likely to be lower
- Poor blood sugar control of diabetic patients
- Lack of data on mental health conditions
- Difficulty integrating mental health services into primary health care

VIOLENCE

From 2010 to 2018 there has been a year-on-year increase in the annual number of homicides in men, mostly gun-related. The rate of homicides due to guns doubled from 2010 to 2016.

Half of homicide victims tested positive for alcohol; **45% had blood alcohol concentration higher than the legal driving limit** (0.05g/100ml).

Most of the increase in homicides was in the Cape Town Metro.

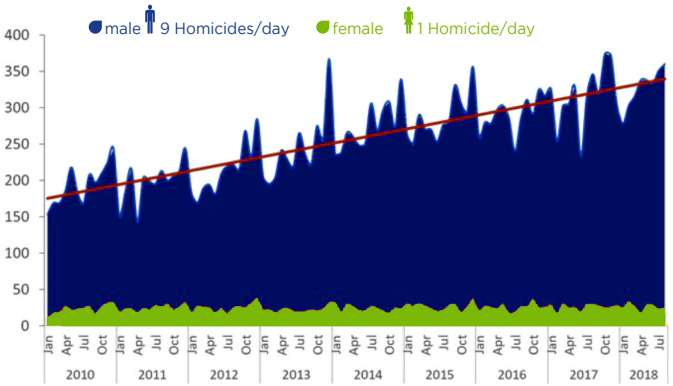
Klipfontein, Mitchells Plain, Tygerberg and Khayelitsha had the highest age-standardised homicide mortality rates in men in 2016.

Interventions

- Integrated Violence Prevention Policy Framework
- Violence Prevention through Urban Upgrading

Challenges

- Poor adherence to gun control
- Relaxation of alcohol access controls



Age-standardised homicide mortality rate by sub-district in the Cape metro, 2016

Health Sub-District	Deaths per 100 000
Klipfontein	131,3
Tygerberg	87,2
Khayelitsha	78,7
Western	61,3
Mitchells Plain	52,8
Northern	46,3
Eastern	43,7
Southern	26,7

Age-standardised motor vehicle mortality rate by sub-district in the Western Cape, 2016

Health Sub-District	Deaths per 100 000
Laingsburg	136,7
Beaufort West	60,2
Prince Albert	52,1
Breede Valley	31,0
Hessequa	30,3
Swellendam	25,1
Cape Agulhas	23,7
Langeberg	20,9
Thewaterskloof	20,3

Road traffic injuries: The absolute number of road injury deaths increased slightly between 2012 and 2018, but as population size has also increased, age-standardised road injury mortality rates have remained fairly constant. There has been **an increase in passenger deaths, as well as a high number of pedestrian deaths.**

48% of road traffic victims tested positive for alcohol;

42% had blood alcohol concentration above legal driving limit (0.05g/100ml).

Interventions

- Average Speed Over Distance
- Random breath test (RBT) operations
- Safely home campaign

Challenges

- Resistance to ↓ speed limits
- Inadequate resources for more RBT operations
- Difficulty ↓ alcohol supply in hot spot areas

Age-standardised pedestrian mortality rate by sub-district in the Western Cape, 2016

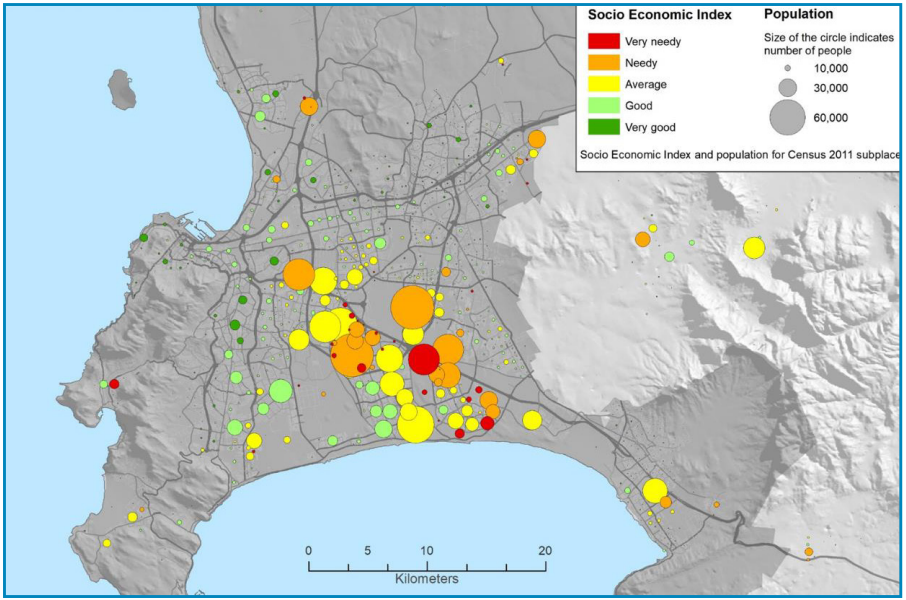
Health Sub-District	Deaths per 100 000
Breede Valley	23,9
Laingsburg	20,2
Theewaterskloof	18,4
CT Western	16,5
CT Tygerberg	16,0
Beaufort West	15,9
Cederberg	15,7
CT Klipfontein	15,7
Langeberg	15,1
Prince Albert	14,3
Swellendam	13,4
CT Khayelitsha	12,8
Drakenstein	12,3
CT Northern	12,1
Knysna	12,0

See the Burden of Disease Report for in depth information

While the Western Cape is considered one of the wealthiest provinces, it is also one of the most unequal provinces with a Gini co-efficient >0.5.

Inequity, as measured by the Gini co-efficient, has increased since 2011 despite improvements in the human development index (HDI), a measure of relative development of a population including education, health and living conditions.

The differing trends in Gini co-efficient and HDI suggest that development improvements have not been equitably distributed, with increasing provincial inequity. The spatial distribution of poverty is critical to understanding the provincial burden of ill health.



Cape Metro: Number and distribution of individuals according to socio-economic index. (Circle size represents number of people; colour represents the socio-economic index)

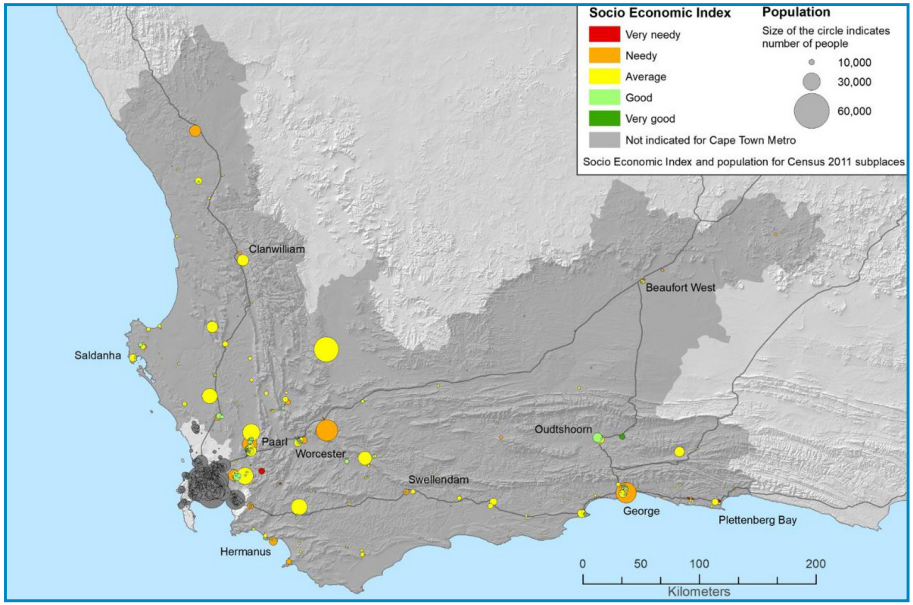
The socio-economic index is comprised of the following:

- Economic index (Employment, income, economic dependency ratio)
- Household services index (lighting source, water supply, refuse disposal, toilet)
- Education index (illiteracy, schooling, adult education)
- Housing index (dwelling type, room density)

Most people in the Cape Town Metro live in the south east (Khayelitsha, Eastern, Tygerberg, Klipfontein), with high levels of socio-economic need.

When looking at the burden of early mortality, there are differences across districts and sub-districts, reflecting the inequity and socio-economic index.

The poor South East sub-districts in the Cape Town Metro are heterogeneous, with pockets of extreme poverty. Areas of extreme poverty are also scattered across other sub-districts.



The number of children accessing child support grants (CSGs) in the province has doubled from ~500,000 in 2018 to >1 million in 2019.

Nearly 20% of CSG recipients are 14-17 years old, reflecting expanded eligibility for CSGs up to 17 years of age from 2011.

WHAT NEXT?

HIV/AIDS and tuberculosis

- Address upstream determinants including poverty and gender equity, alcohol and tobacco use
- Transversal interventions e.g. community oriented primary care
- Improve surveillance & information use
- Pre-exposure prophylaxis
- Fully achieve 90-90-90 targets
- Full roll out of dolutegravir
- New drugs for drug-resistant TB

Maternal, perinatal and child health

- Effective antenatal care provision, including addressing the social determinants of health
- Continued training of staff in care of women during childbirth, including the recognition of foetal distress
- First 1000 days initiative is an apex priority for the Western Cape government for the next 5 years

Non communicable diseases

- Implement / strengthen evaluate policy interventions aimed to reduce population risk for NCDs e.g. sodium, sugar, tobacco, alcohol consumption
- Optimise behaviour change programmes to prevent NCDs
- Improve NCD management
- Evaluate mental health-related interventions
- Improve estimates of true population and service burden of mental illness

Violence and road traffic injuries

- Interventions in Violence Prevention Policy Framework need to be implemented with urgency, including the Alcohol Harm Reduction policy
- Better gun control
- Improve law enforcement
- Integrated and safe public transport system
- Focus on low income pedestrians and passengers

GLOSSARY

Phrase/words	Meaning
Age-standardised mortality rate	A weighted average of age-specific mortality rates per 100,000 persons per year. Age-standardised mortality rates can be used to compare mortality rates of regions without being affected by the difference in age distributions of the population from region to region.
Drug-resistant TB	Patients with tuberculosis (TB) that does not respond to the standard treatment. TB can be resistant to a single drug (rifampicin-resistant), or multiple drugs (multi-drug resistant [MDR] or extensively drug resistant [XDR]).
Early mortality (death)	Also known as premature mortality, measured as years of life lost. It is a summary measure of unfulfilled life expectancy and gives more weight to the deaths of younger people than to older people.
Extra-pulmonary TB	TB located elsewhere in the body other than the lungs.
Gini co-efficient	A measure of income inequality, ranging from 0 to 1. A value of 0 represents a perfectly equal society and a value of 1 (or 100%) represents a perfectly unequal society.
HbA1C	Glycosylated haemoglobin. A measure of blood sugar control in people living with diabetes.
Human development index	A summary measure of average achievement in key areas of human development: a long and healthy life, being knowledgeable and having a decent standard of living.
Maternal mortality ratio	The number of maternal deaths (during pregnancy, and up to 42 days post-delivery) per 100,000 live births.

Phrase/words	Meaning
Morbidity	Having a disease condition or a symptom of a disease condition.
Prevalence	The proportion of the population affected by a particular disease condition.
Retreatment (TB)	A patient who was previously treated for TB, and who needs repeat treatment for TB.
Social determinants of health	The conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels. The social determinants of health are mostly responsible for health inequities – the unfair and avoidable differences in health status seen within and between countries. Can also be considered upstream determinants.
Sustainable development goals (SDGs)	A collection of 17 global goals aiming to achieve a better and more sustainable future for all. The SDGs were set in 2015 by the United Nations General Assembly to be achieved by 2030.
Thembisa model	South African HIV and demographic model (www.thembisa.org).
Treatment success rate (TB)	The percentage of all new TB cases in a given year that successfully completed TB treatment.
Upstream interventions	Interventions that focus on improving fundamental social and economic structures in order to decrease barriers and improve supports that allow people to achieve their full health potential.
Viral suppression	HIV viral load copies < 1000 copies per ml.

NOTES:

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