South African Child Gauge 2020

Food and nutrition security

Julian May, Chantell Witten & Lori Lake

children's institute
child rights in focus
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UNIVERSITY OF CAPE TOWN
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Broad overview of the *South African Child Gauge 2020*

The *South African Child Gauge®* is published annually by the Children's Institute, University of Cape Town, to monitor progress towards realising children's rights. This issue of the *South African Child Gauge* draws attention to the lifelong impact of poor nutrition, and identifies critical points for intervention across the life course to reduce the growing burden of obesity and non-communicable diseases; enhance children's health, education and employment prospects; and break the intergenerational cycle of poverty and malnutrition.

PART ONE: Children and Law Reform

Part one outlines recent legislative developments that affect the lives and rights of children. These include the Social Assistance Amendment Act, Children's Amendment Bill, Victim Support Services Draft Bill and Domestic Violence Bill, as well as the Draft Regulations to the Citizenship Act, Regulations to the Births and Deaths Act and School Admissions Policy.

See pages 10 – 19.

PART TWO: The slow violence of malnutrition

Part two presents nine chapters that consolidate the latest research evidence, reflect on current and emerging challenges, showcase examples of promising practice, and identify opportunities to address South Africa's double burden of over- and undernutrition.

The first three chapters describe the burden, drivers and long-term impacts of child malnutrition, followed by a child-centred analysis of the food system and the underlying discourses that shape children's attitudes, behaviours and engagements with this system. The next four chapters adopt a life-course approach to trace the development of a child from the womb to adolescence, highlighting the opportunities and challenges for food security and nutrition at each stage of the child's development. The final section offers a call to action and provides recommendations to bring about nutrition security for South Africa's
children – with a focus on social protection and double-duty actions to address the double burden of under- and overnutrition. These recommendations are addressed to all spheres of government, academics, students, civil society and the private sector.

See pages 20 – 151.

PART THREE: Children Count – The numbers

Part three provides a child-centred analysis of national data, tracking progress and helping to make visible inequalities in children's health, nutrition, living conditions and access to services. For a full set of indicators see www.childrencount.uct.ac.za

See pages 152 – 194.

Front cover photograph: The National Association of Child Care Workers helps to build the resilience of vulnerable children and families by working in their life-space using ordinary human interaction as a context and a means to meet children's emotional needs and to promote their healthy development. .

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Abbreviations

ART	Antiretroviral Therapy
BDRA	Births and Deaths Registration Act
BMI	Body Mass Index
BMS	Breastmilk Substitutes
BT20+	Soweto Birth-to-Twenty Plus cohort
CCL	Centre for Child Law
CDG	Care Dependency Grant
CHWs	Community Health Workers
CMD	Common Mental Disorder
CPI	Consumer Price Index
CSG	Child Support Grant
DBM	Double Burden of Malnutrition
DBE	Department of Basic Education
DSD	Department of Social Development
DHA	Department of Home Affairs
DoH	Department of Health
EBF	Exclusive Breastfeeding
ECD	Early Childhood Development
FAO	United Nations Food and Agricultural Organization
FCG	Foster Child Grant
FoPL	Front of Package Labeling
GAIN	Global Alliance for Improved Nutrition
GHS	General Household Survey
GNR	Global Nutrition Report
HCW	Health Care Worker
HIC	High-Income Country
HIV	Human Immunodeficiency Virus
HPL	Health Promotion Levy
IFA	Iron and Folic Acid
ISHP	Integrated School Health Programme
IYCF	Infant and Young Child Feeding
LHR	Lawyers for Human Rights
LMIC	Low- and Middle-Income Countries
MBFI	Mother Baby Friendly Initiative
MEC	Members of Executive Council
MM	Mentor Mother
MMS	Multiple Micronutrient Supplementation
NCD	Non-Communicable Diseases
NFCS	National Food Consumption Survey
NIDS	National Income Dynamics Study
NIECD	National Integrated Early Childhood Development Policy
NSNP	National School Nutrition Programme
NGOs	Non-Governmental Organisations
NIDS	National Income Dynamics Study
NIDS-CRAM	NIDS-Coronavirus Rapid Mobile Survey
PRR	Parental Responsibilities and Rights
PSDLS	Project on Statistics on Development and Living Standards
RTHB	Road to Health Book
SA	South Africa(n)
SADHS	South African Demographic Health Survey
SAM	Severe Acute Malnutrition
SANHANES	South African National Health and Nutrition Survey
SAPS	South African Police Service
SASSA	South African Social Security Agency
SBCC	Social and Behaviour Change Communication
SDGs	Sustainable Development Goals
SOFI	State of Food Insecurity
SSBs	Sugar-Sweetened Beverages
Stats SA	Statistics South Africa
UNCRC	United Nations Convention on the Rights of the Child
VAD	Vitamin A deficiency
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WRA	Women of Reproductive Age
WTO	World Trade Organisation

Foreword

Dr. Lawrence Haddad, Executive Director of the Global Alliance for Improved Nutrition

This excellent volume describes malnutrition in children as "slow violence". That may seem like an exaggeration, but it is exactly right. It would take a powerful malevolent force to inflict havoc on a child in the way that malnutrition does. Let's put it plainly, malnutrition systematically destroys a child: it damages their chances of survival, their cognitive development, their immune system, their bone and muscle structure and their livelihood prospects.

But the wrecking ball that is early childhood malnutrition can be prevented. We know what to do. It is not glamorous, nor characterised by silver bullets. It is about all corners of society working in unison on behalf of children's rights. Governments must lead. They need to make this a top priority. They need to develop an evidence-based plan and then finance, implement and monitor it. The progress in child nutrition statistics should be pored over by the Minister of Finance as much as the economic statistics are. It is incredible in a country that is as well-endowed as South Africa that stunting rates are 27% and that they have been at this level since 1999. Kenya's stunting rate has halved over the corresponding period and is now lower than South Africa's. South Africa's agriculture, social protection, health systems, water and sanitation systems and its schools and early childhood development centres all need to be mobilised by the Government to fight this violence.

Businesses that act to make nutritious foods more available and affordable should be rewarded by fiscal policy; those that wantonly do the opposite should be punished by the same levers. Civil society should organise around the violence against children that is malnutrition. Where is the "extinction rebellion" against unaffordable nutritious food? Development Banks should find ways to leverage private sector investment from pension funds and impact investors towards small and medium enterprises that do good things for nutrition in the fields of food, water, sanitation and health services. Women's care responsibilities should be properly recognised through law and remunerated accordingly so that women do not have to choose between working and taking care of their infants.

Active South African civil society and strong labour unions should be fighting for children's rights from the point of conception. The world class research community in the country should be documenting outcomes, calling out inaction and generating and testing effective solutions to combat this violence. COVID-19 is going to make all of this harder, but even more important to do. We must deny COVID-19 the legacy of a generation of children whose lives and livelihoods have been undercut irreversibly by the infection and the efforts to control its spread.

It is often said that when a dark situation cannot be discarded, then it must be because of a curse. Malnutrition is not a curse. It is a condition waiting to be vanquished. But this can only happen if there is an evidence-based plan to combat it, the political and administrative resolve to put it into action and the technical finesse to monitor and course correct those actions.

South Africa has all of these capacities in abundance. The time to mobilise them is now. This report can serve as a beacon, showing where we want to get to; a spotlight on what is working and what is not; and a light in the dark for the 27% of South African children who have been cast there by the powerful forces of malnutrition. I was born in South Africa and I am a child of this country. But whether or not we were born in this land, we must all be stronger for South African children, now and in the future. The violence must stop and we must be the ones to stop it.

Statement by the South African Human Rights Commission

Children are the future of our society and the success of any country depends, to a large extent, on the way we raise our children and nurture their growth and development. It is for this reason that Nelson Mandela described children as the greatest treasure of any society and that the true character of any society is best reflected in how it treats its children.[1]

Children's rights aim to protect and nurture children's development as outlined in the United Nations Convention on the Rights of the Child, the African Union's Charter on the Rights and Welfare of the Child and the Bill of Rights in our own Constitution. The overriding principle pertaining to the promotion and protection of children's rights is the requirement that the best interests of children shall be the paramount consideration in all matters that affect them.

Adequate and safe nutrition plays an important role in children's survival and development, yet the 2020 Global Nutrition Report describes how a double burden of malnutrition prevents children from realising their full potential. Adequate food and nutrition therefore form an essential part of the broader basket of children's rights. The UN Convention requires State Parties like South Africa to take appropriate measures to ensure the provision of adequate nutritious foods in order to combat disease and malnutrition, whilst the AU Charter requires State Parties to ensure the provision of adequate nutrition and safe drinking water for children. Our own constitution provides the right to basic nutrition for every child and the right of access to sufficient food for every person in the country - rights which our government has a constitutional obligation to respect, protect, promote and fulfil.

This issue of the *Child Gauge* details South Africa's progress in realising children's rights to adequate food and nutrition and the impact of malnutrition on children's health, education and development through their life course. This well researched account also addresses the impact of COVID-19 on the realisation of these rights and the ability of the state to discharge it obligations.

The *2020 Child Gauge* paints a worrying picture of the state's failure to discharge its obligations to our children. Whilst acknowledging that some progress has been made, the report shows that levels of stunting – a sign of chronic malnutrition – have remained extremely high for the last 20 years – affecting 27% of children under five years and undermining their future education and earning potential. In addition, rising consumption of unhealthy foods – low in nutrients and high is salt, sugar and fat – is fuelling an increase in obesity – with 13% of children under five years overweight or obese and at increased risk of developing chronic illnesses such as diabetes and heart disease.

This double burden is exacerbated by poverty and inequality: Two thirds (59%) of South Africa's children live in poverty, and South Africa is regarded as one of the most unequal country in the world. High levels of unemployment, a plummeting economy and COVID-19 have further worsened the plight of South Africa's children.

The *Child Gauge* describes the "slow violence of malnutrition" and calls for a clear commitment from government and other stakeholders to ensure that our children's rights to adequate food and nutrition security are effectively and meaningful realised. It calls for a food system that is child-centred, pro-poor, pro-health and sustainable and that will ensure that children's best interests are indeed of paramount importance. This will require a radical transformation in how government carries out its obligations towards the protection and promotion of child rights through legislation, policy and other measures, and in how it co-operates with other stakeholders including grassroot communities and bodies like the South African Human Rights Commission (SAHRC).

The *Child Gauge* also calls for the establishment of a National Food and Nutrition Security Council chaired by the Deputy President to improve coordination and advance food and nutrition security as initially proposed by South Africa's National Policy on Food and Nutrition Security in 2014. The failure to establish the Council as a multi-stakeholder forum has made it difficult for government to respond effectively to the impacts of the COVID-19 pandemic resulting in litigation and community-based organisations intervening in order to provide food relief to those affected by the pandemic.

It is hoped that the negative impact of COVID-19 on the food and nutrition security needs of children in South Africa will create a greater sense of urgency and a more proactive response from government and all relevant stakeholders.

The *South African Child Gauge 2020* makes an invaluable contribution in raising issues that affect children and their rights to the attention of government and civil society and making recommendations on how best to address these challenges. The Children's Institute and the authors should be commended for their continuous efforts in contributing towards the advancement of child rights in our country.

1 Jennifer Crwys-Williaam (ed.) *In the words of Nelson Mandela: A Little Pocketbook.* Johannesburg: Penguin Books, pp 21 -22.

PART 1

Children and Law Reform

Part one summarises and comments on recent policy and legislative developments that affect children including the:

- Social Assistance Amendment Act
- Children's Amendment Bill
- Victim Support Services Draft Bill
- Domestic Violence Bill
- Draft Regulations to the Citizenship Act
- Regulations to the Births and Deaths Act
- School Admissions Policy

Flourishing food gardens ensure a constant supply of fresh vegetables for the children attending the Bulungula Incubator's Jujurha Preschool.
© Annette Champion.

Legislative developments in 2019/2020

Paula Proudlock, Mbonisi Nyathi and Lucy Jamieson[i]

In this chapter we provide updates on seven significant legal developments affecting children's access to grants and a range of services essential for their development and protection. Services affected include early childhood development, alternative care, education, birth registration, citizenship, protection and psychosocial services, and alternative care.

The Social Assistance Amendment Bill

The Social Assistance Amendment Bill was tabled in Parliament in April 2018 and passed in October 2020.[1] The Bill amends the Social Assistance Act and includes amendments giving the Minister authority to make additional payments on top of existing grant amounts. This amendment will enable the Minister to introduce a higher Child Support Grant (or CSG Top-Up) for family members caring for orphaned children.[2] The CSG Top-Up is the first part of the "comprehensive legal solution" to the foster care crisis which the Minister has been obliged to design and implement in terms of a 2011 High Court Order.[3] The second part of the solution is contained in the Children's Amendment Bill, which has recently been tabled in Parliament (see below).

During 2020, public hearings were convened by both the National Assembly and the National Council of Provinces. All submissions made on the CSG Top-Up were supportive of the proposed amendments.[4]

- The Centre for Child Law (CCL) submitted that, if effectively implemented, the CSG Top-Up will lessen the pressure on the foster care system that is causing social workers to be overloaded and preventing them from helping children who have been abused or neglected. The CCL cautioned that because the CSG Top-Up will be slightly less than the Foster Child Grant (FCG), children already receiving the FCG should continue to receive it to prevent the reform from being regressive, while new applicants should be referred to the CSG Top-Up. Over time, children in the foster care system would gradually be reduced to only those "in need of care and protection" from the state.[5]
- The Children's Institute (CI) advised Parliament to request clarity from the Minister on the details she intended to prescribe via government notice and regulation, as the success or failure of the reform lay in these details. The regulations and government notice will determine the top-up amount that orphans qualify for and the proof families will need to provide. The CI argued that the system should be 'inclusive' by avoiding stringent requirements such as the insistence on two death certificates to prove orphan status, as this would exclude the most vulnerable orphans.[6]
- The Children in Distress Network (CINDI) raised concerns about the grant amount given high poverty levels and presented a case study to illustrate how the comprehensive legal solution could work in practice.[7]

At the time of publication, the Bill was awaiting signature by the President. Once the Bill is signed, the draft regulations can be gazetted for public comment. If the CSG Top-Up is implemented by 1 April 2021, then it is less likely that the 2011 High Court order will have to be extended for a fifth time.[8]

Children's Amendment Bill

The comprehensive legal solution to the foster care crisis also requires amendments to the Children's Act to clarify which orphaned and abandoned children should go into the care and protection system (and therefore into foster care) versus those who already have family care and simply need the CSG Top-Up and support services. To do this, s150(1) (a) of the Act needs to be amended. Other sections also need amendments to deal with the backlog of extensions, prevent existing FCG beneficiaries from losing their grants, and make it easier for family members to formalise their parental responsibilities and rights.

The Children's Amendment Bill,[9] tabled in August 2020, contains most of the required amendments. These include:

- changing the definition of an orphan to ensure that single orphans whose other biological parent is effectively absent and uninvolved are included in the definition;[10]
- allowing the children's court to hear applications for legal guardianship by family members caring for orphaned and abandoned children;[11] and
- clarifying that the majority of orphaned or abandoned children in the care of family members are not children 'in

i Children's Institute, University of Cape Town

need of care and protection' and therefore do not need to be placed into foster care to obtain an adequate social grant.[12]

Yet there is no provision to prevent the 300,000 orphans already in foster care with family members from losing their FCGs when their cases are reviewed by the children's court in terms of s159 (2). This is because s150 (1)(a) is being changed to clarify that such children are no longer going to be considered to be children 'in need of care and protection' from the state and children's courts will not be able to extend their foster care placements unless the Bill contains a transitional clause allowing an exception for existing foster care placements.[13, 14]

Besides addressing the foster care crisis, the 147-clause Bill also proposes amendments to other areas of child law. These include:

Partial care and early childhood development programmes

Over 1,200 submissions opposed the amendments to the partial care and ECD chapters and recommended amendments to strengthen the struggling ECD sector. These submissions are calling for:

- a one-step registration process for ECD providers;
- different types of ECD providers to be regulated differently;
- all children attending any type of ECD programme to be able to access the early learning subsidy if they need it;
- simpler, adequate health, safety and programme standards to be put in place and approved through one registration process; and
- it to be made clear that "conditional registration" of ECD providers is possible before meeting the full requirements of registration and will therefore be granted based on lower threshold requirements
- support for conditionally registered ECD providers to meet the full registration requirements within a specified period and MECs to report on these support systems.[15]

Protection of children's privacy in court

The Bill proposes to delete s74, which currently protects children's privacy in children's court proceedings, and replace it with a new s6 A which simply lists a range of current privacy laws. This repetition in the Children's Act is unnecessary since these are laws already in place and must be respected. The amendment fails to recognise the need to guarantee specific privacy to children during court proceedings. Furthermore, the list is incomplete as it has omitted the Divorce Act and the Maintenance Act, which also provide important provisions on protecting children's identity in court proceedings. If the Bill is passed as is, the Act will no longer provide for the specific protection of children's privacy in children's court proceedings, nor will it extend protection to children in High Court proceedings. Submissions have recommended alternative wording to ensure children's privacy is protected in both the children's court and high court.[13, 14, 16]

Parental responsibilities and rights of unmarried fathers

Married fathers automatically acquire full parental responsibilities and rights (PRRs) while unmarried fathers only acquire full PRRs if they meet the requirements set out in s21 of the Act. Alternatively, they may acquire PRRs through a court order. The requirements in s21 have caused some confusion and amendments are proposed to simplify the wording and remove any adjectives that require "value" judgements. A mechanism for unmarried fathers to obtain a certificate from the family advocate to confirm their s21 PRRs is also being introduced to provide a legal document that fathers can use to prove their PRR. All these amendments are generally being supported by civil society and additional amendments are being proposed to further promote the involvement of fathers in their children's lives.[13, 17, 18] For example, the new certificate process does not provide for unmarried fathers in situations where the child's biological mother has died or abandoned the family. Submissions have been made to enable these fathers to obtain a s21 certificate.

Adoption

The amendments to the provisions regulating adoption include amendments to s239 on letters of recommendation and s249 which regulates fees for adoption services.

In terms of s239, an application for an adoption order must be accompanied by a letter from the provincial Head of Social Development, recommending the adoption of the child. Delays by the department in issuing the s239 letter will therefore delay the finalization of the adoption. In 2018, the High Court considered an application brought against the KwaZulu-Natal Department of Social Development because of lengthy delays in issuing s239 letters.[19] The Court declared that the right of access to court and the right to just administrative action had been violated by these delays caused by the department taking into account factors that were not required by the law. Networks representing adoption service providers have recommended further amendments to s239 to impose a 30-day turn around for s239 letters and to give the court authority to dispense with the letter if the department does not report to the court within 14 days of failing to meet the 30-day deadline.[20, 21]

Section 249 regulates the fees that can be charged for adoption services. Section 249, when read with s250 which allows only certain persons to provide adoption services, currently limits the possibility of financial and criminal exploitation by service providers. However, the Bill proposes to delete s249 which would effectively remove these safeguards. Networks representing adoption service providers have recommended that s249 be retained with amendments and that fees by private social workers should be regulated by the South African Council for Social Service Professions.[20, 21]

The National Assembly called for written submissions in October 2020 and will hold public hearings in February 2021.

National Admission Policy for Schools of 1998 and Circular 1 of 2020

In late 2019, the Eastern Cape High Court declared sections 15 and 21 of the National Admission Policy for Schools unconstitutional.[22] These sections were being used by the National and Provincial Departments of Basic Education (DBE) to exclude undocumented children from school. A DBE circular informed schools that DBE would only provide funding for a child if the school could provide an ID number for that child. The DBE's reasons for this change in the funding policy were that at one stage, so-called 'ghost pupils' were discovered (where some schools claimed additional funding for non-existent pupils) and that non-citizens did not have a right to education unless legally in the country.[23] The department's requirement resulted in undocumented children (whether South African citizens or not) being excluded by schools or schools that admitted them receiving less funding, diluting the quality of education and food for all the children in the school.

Section 15 of the Admission Policy required caregivers to submit the child's birth certificate to the school as part of the admissions process. If the caregiver did not do so, the section provided that a learner "may" be conditionally admitted but the caregiver of the learner had to "ensure that the admission of the learner is finalised within three months of conditional admission." In reality, children were unable to obtain birth certificates within the three-month period, which led to those children being removed from the schools – or in some instances, not being admitted at all. Section 21 provided that "persons classified as illegal aliens must, when they apply for admission for their children or for themselves, show evidence that they have applied to the Department of Home Affairs (DHA) to legalise their stay in the country in terms of the Aliens Control Act, 1991 (No. 96 of 1991)." Many children could not obtain proof that they had applied to legalise their stay and were accordingly refused admission.

According to the DBE's own administrative system, approximately one million children attending public schools were undocumented.[24] Approximately 80% (800,000) of these children were South African (SA) citizens and 20% (200,000) were foreign nationals. With regards to the citizens, there were several reasons why the school did not have their birth certificates: the children did not have birth certificates; or they did, but their caregiver had not yet submitted it to the school; or they had lost it and were unable to obtain a new copy from DHA; or the school or district DBE had not yet entered the information into the provincial DBE database.

If DBE had been allowed to continue excluding these children from school and underfunding schools with undocumented children, many children's right to basic education would have been infringed. The policy was not only negatively affecting those excluded, but also those attending school because the quantity and quality of education goods and services (such as textbooks and the school nutrition programme) would be diluted for *all* the children in attendance.

The court held that section 15 of the Admission Policy constituted a severe limitation of children's constitutional rights including the right to basic education (s29); the right of children to have their best interests considered paramount (s28 (2)); their right to dignity (s10); and equality (s9 (3)). As for section 21, the court held that the right to education extended to everyone within South Africa's borders and that nationality and immigration status were irrelevant. The court, therefore, declared both sections unconstitutional.[25]

Following this judgment, the national DBE published a circular to informing all provincial DBEs and schools that they are obliged to allow undocumented learners unconditional access to education in line with the judgment.[26] If the child's caregiver is unable to provide formal identity or immigration documents for the child, the provincial DBEs and schools must accept alternative proof of the child's identity such as an affidavit by the caregiver which fully identifies the child.

This circular replaces sections 15 and 21 of the Admissions Policy until DBE has finalised its amendments to the policy to align it with the High Court judgment.

Births and Deaths Registration Act and Regulations

Children living with their fathers face the risk of remaining without a birth certificate for many years if their father is not married to their mother and the mother is undocumented, deceased or has abandoned the family. This is because the Births and Deaths Registration Act (BDRA)[27] and its regulations and forms[28] do not enable birth registration in these circumstances.

A mother is 'undocumented' if she does not have an identity document or is a non-citizen and has lost her passport or her permit or visa has expired. In these cases, regulations 3, 4, 5 and 12, read together with section 10 of the Act, are being used by the DHA to prevent the father (who is South African with a valid identity document) from making the application to register the birth of the child. This occurs even when the mother is present at DHA and available to consent to the father's application.

If a mother is deceased or has abandoned the family, regulation 12 read together with section 10 of the Act, prevents the unmarried father from making a birth registration application for the child because DHA requires the mother to be present at the application and to consent to the application. This is impossible if she is dead or her whereabouts unknown to the father and child. Regulations 3, 4 and 5 also act as barriers to unmarried fathers in these circumstances because they are often cannot provide all the prescribed documents.

To protect children in these situations from remaining unregistered, Mr Naki, Legal Resources Centre, Centre for Child Law and Lawyers for Human Rights took the Minister and DHA to court to have the problematic regulations and section 10 of the BDRA declared unconstitutional.[29] The Grahamstown High Court declared aspects of regulations 3, 4, 5 & 12 unconstitutional[30] and provided a 'reading-in' remedy to address these. A reading-in remedy is when a court adds words into the regulations to make them constitutional. By doing this, the Court effectively 'amends' the regulations. This reading-in remedy made it clear that DHA must accept applications by undocumented mothers where the missing document is a passport, or by unmarried fathers where the mother's documents are missing, or she is deceased or has abandoned the child. The 'reading-in' remedy also struck out the sub-regulations that required all the documents listed in regulations 3, 4 and 5 to be submitted before DHA would accept an application.[31]

The High Court did not agree with the applicants that section 10 of the Act was problematic and therefore did not declare this section unconstitutional. The CCL and LHR took this aspect of the judgment on appeal to the full bench of the High Court, which subsequently declared section 10 to be unconstitutional.[32] The appeal court held that section 10, in its present form, implicitly prevents an unmarried father of a child born outside of marriage from giving notice of the child's birth if the mother is absent, because it requires the mother to consent to the child taking the father's surname.[33] This discrimination on the basis of the marital status of the father directly violates the father's right to equality in terms of section 9(3) of the Constitution.[34]

The appeal court held that by extension, it also has the effect of denying children, with a legitimate claim to a nationality from birth, from receiving a birth certificate. In this manner, it discriminates against children born outside of marriage.[35] The court further indicated that children without birth certificates are 'invisible' and their lack of recognition in the civil birth registration system exposes them to the risk of being excluded from the education system, social assistance and healthcare.[36] A law that results in discrimination with these potentially enormous consequences cannot be said to be in the best interest of the child.[37]

Section 10 was therefore declared inconsistent with the Constitution and invalid to the extent that it does not allow an unmarried father to register the birth of his child in the absence of the child's mother.[38] The appropriate remedy devised by the court was a reading-in remedy that amended section 10 to enable the birth of a child born outside of marriage to be notified by the father where the mother is absent.[39] Parliament was given 24 months to amend the BDRA.[40]

In September 2020, application was made to the Constitutional Court to confirm the appeal court's order of constitutional invalidity.[41] The Minister and DHA stated in their submission to the Constitutional Court, that since the 2018 judgment of the High Court, the Department had commenced the process of making amendments to the relevant regulations to enable unmarried fathers to give notice of birth of their child without requiring the presence of the child's mother.[42] They did not oppose the application for confirmation of the unconstitutionality of section 10 of the BDRA, but asked the court to devise a different interim reading-in remedy. They argued that the law did not cater for the situation when there was a dispute between unmarried parents as to what surname the child should be registered with. This issue was raised for the first time in the Constitutional Court as the Minister of DHA had not raised it in the first two courts that had dealt with the matter.

If the Constitutional Court confirms the appeal court's order, it will be a victory for unmarried fathers and unregistered children in their care, particularly when the mother is deceased, undocumented or has abandoned the family.

South African Citizenship Act draft regulations

Section 4(3) of the Citizenship Act[43] makes provision for children born in South Africa (SA) to parents who are not South African citizens or permanent residents to apply for SA citizenship by naturalisation when they turn 18 years old.

To qualify, they must have been 'ordinarily resident' in SA from birth until turning 18, and their birth must have been registered in accordance with the provisions of the Birth and Deaths Registration Act.[27] Section 4(3) was passed by Parliament in 2010 and came into operation on 1 January 2013.

The section is one of the mechanisms in the Citizenship Act to prevent and eradicate statelessness in South Africa. A stateless person is defined in international customary law as "a person who is not considered to be a national of any State under the operation of its laws"[44] and is a serious human rights violation which should be addressed collectively by all states.

However, section 4(3) has not been accessible in practice because the DHA failed to promulgate the regulations and application forms necessary to enable the section to be implemented. This is because the DHA interpreted the section to only apply to children born after 1 January 2013 (the date that the amendments to the Citizenship Act came into force) and argued that they were only obliged to start implementing the section in 2030, when individuals applying in terms of the provisions would turn 18 years old.[45] This led to numerous court cases being brought against the DHA on behalf of children or young adults who should have benefitted from the provisions.

Finally, in 2017, in Miriam Ali v Minister of Home Affairs,[45] the High Court ordered the Minister to make regulations, within one year, to enable applications for citizenship by naturalisation in terms of section 4(3) of the Act, and to allow applications on affidavit as an interim remedy while forms did not exist. After the Minister appealed the judgment, the Supreme Court of Appeal (SCA) upheld the decision of the High Court.[46] More than nine months later, the Minister tried to appeal to the Constitutional Court. This was outside of the prescribed time periods in which to lodge an appeal. Therefore, in February 2020, the Constitutional Court indicated that it would not hear the matter.

In July 2020, the draft regulations were finally gazetted for public comment.[47] They have been criticised by a number of civil society organisations[48] who are concerned that they will result in the exclusion of many eligible young people because they go beyond what is authorised by section 4 (3) by imposing additional unattainable requirements on applicants and they fail to take into account recent case law or international law. For example:

- The regulations exclude people who did not obtain their birth certificates within 30 days of birth.[49] This restriction in the regulations is not consistent with the wording of section 4 (3) of the Act. The Act requires the applicant's birth to have been registered in accordance with the Births and Deaths Registration Act, and this Act does allow for birth registration after 30 days (late birth registration).
- The regulations list a number of supporting documents which must be provided.[50] These include the applicant's maternity certificate, original birth certificate, school reports and a letter from the school they attended in grade 1, proof of residence since birth, and originals of their parent's travel and immigration status documents. If every document on this list is considered compulsory, many eligible citizens will be excluded. For example, if a maternity certificate is considered compulsory, people who were born at home will be excluded; or if a letter from their grade 1 school is required but that school has lost its records or closed down, the young person would be excluded.[51] The regulations should therefore be amended to make it clear that applicants need not provide all of these documents.[48]
- Applicants will be expected to prove their parent's status in the country by providing the original of their parent's visa, permit or passport.[52] However, the parent's status is irrelevant and not required by section 4 (3) of the Act. Furthermore, this requirement will be a major barrier for young people who were orphaned or abandoned as children, because they are unlikely to be unable to provide any documents proving their parent's status.

At the date of publication, the Regulations have not yet been finalised by DHA and DHA has consistently refused to accept applications 'on affidavit' in the interim as ordered by the High Court in 2017 and the SCA in 2019. This has necessitated further litigation against the DHA.[53]

Domestic Violence Amendment Bill

The Minister of Justice and Constitutional Development recently introduced three bills in Parliament to refine the criminal laws in relation to gender-based violence.[54] These included the Domestic Violence Amendment Bill,[55] which aims to amend the Domestic Violence Act[56] to address practical challenges, gaps and anomalies that have manifested since the Act was put into operation in 1999.

The Bill, tabled in Parliament in August 2020, includes amendments aimed at:

- facilitating electronic access to protection orders;
- creating an electronic repository of protection orders;
- obliging the departments of Social Development and Health to provide certain services to victims of domestic violence; and

- creating a universal obligation to report domestic violence to a social worker or a police official.

Parliament called for written submissions on the three bills and held five days of public hearings. A submission by Sonke Gender Justice, which was endorsed by a number of other organisations, welcomed the amendments to the Domestic Violence Act but emphasised that any amendments to the Act or any other legislation aimed at curbing gender-based violence would be of little use if structural barriers are not addressed. These include systemic challenges in the South African Police Services (SAPS) and the court system, which often result in secondary victimisation.[57]

Most submissions supported the amendments, which establish a duty to report domestic violence against children[58] in line with section 110 of the Children's Act[59] and section 54 of the Criminal law (Sexual Offences and Related Matters) Amendment Act[60]. However, the provisions for the mandatory reporting by anyone with suspicion or reasonable knowledge of domestic violence involving adults, and the criminalisation of failure to report, was flagged as problematic. These provisions may place the victim and her/his children in further danger, discourage victims from seeking help and criminalise many service providers who provide refuge and confidential support to adult victims.[61]

Organisations working with children also recommended that the definition of "domestic violence" be expanded to include "corporal punishment" and "child neglect",[57, 62] and that section 5 be harmonised with the Children's Act, which requires a risk assessment to be conducted by a social worker, via Form 22, when a child has been abused.[57, 62]

The Children's Institute recommended that designated social workers and police officers be adequately trained and encouraged to use section 153 of the Children's Act to remove the offenders, rather than the women and children, from the household when domestic violence or abuse has taken place in the home.

Victim Support Services draft Bill

The National Strategic Plan on Gender-Based Violence and Femicide (NSP GBVF), 2020-2030[63] aims to strengthen the legislative and policy framework to combat violence against women and children. One of the gaps identified in the legal framework relates to providing psychosocial services for victims of violent crime. The Victim Support Services draft Bill aims to close this gap and strengthen Pillar Four of the NSP: Response, Care, Support and Healing. The draft bill was published for comment by the Minister of Social Development in August 2020. Once all comments have been considered, it will be submitted to Cabinet for approval before tabling in Parliament.

Civil society has campaigned for many years to ensure that the rights of victims of crime and violence are promoted and protected. The call has been for legislation that will require the state to:

- Inform and educate the public on how the criminal justice system works, what victim's rights are, and how to hold the state accountable when things go wrong.
- Provide victims with information about their cases and how to track their progress
- Empower and support victims by providing and funding psychosocial care
- Develop intersectoral collaboration between all the relevant departments and role-players in the criminal justice system
- Create better accountability mechanisms and a centralised complaints system.[64]

The Bill has been widely criticised by civil society as not providing the legal framework necessary to meet these five objectives and for posing a serious danger to existing services, particularly those providing support in marginalised communities.[65] A child-centred analysis reveals further concerns. We focus below on the provisions of the Bill that affect shelters for victims of domestic violence.

Funding for victim support services and shelters

There is currently no law or provision in a law that obliges the government to provide services and shelters for women and children who need to escape domestic violence in their homes. This gap in the legal framework contributes to the chronic underfunding of non-profit organisations (NPOs) that run shelters.[66] The underfunding of shelters also impacts on the availability of dedicated services for children who accompany their mothers to the shelters: children accessing shelters with their mothers have health and psychosocial needs that are generally not met.

The Bill obliges the National Minister of Social Development to ensure there are enough resources for services for victims of crimes,[67] and places an obligation on the provincial Members of Executive Council (MECs) for Social Development to provide and fund services and facilities for victims of violence.[68] This is a welcome step towards a rights-based approach to services for victims of crime.

However, this obligation is made dependent on the provincial legislature allocating money to the provincial departments of social development for this purpose. Provincial treasuries are dependent on the National Treasury

and Parliament for their revenue. If national government does not increase the share of funding that goes to provincial government, then provinces will not have sufficient resources to fulfil this mandate. This is a challenge for all services provided and funded by the provincial departments of social development. Several laws have been passed by Parliament that place an obligation on the provinces to provide and fund an increased portfolio of services for vulnerable groups, including the Children's Act, Child Justice Act and the Older Person's Act. However, the formula used by the National Treasury and Parliament to decide how much of the national share of revenue goes to provinces has not been changed to take account of these increased mandates.[69-71]

The scope of the Bill

The Bill defines "victim" very broadly to include 'any person who has suffered physical, emotional, spiritual or psychological harm as a result of a violent crime'. It therefore overlaps with the definitions of abuse in the Children's Act. Yet, there is no explicit mention of children's rights and special needs, except the requirement that service providers need to screen their staff against the National Child Protection Register. The Bill should clarify how children fit into the picture.

Screening and assessment

When women experience gender-based violence in the home, children are often co-victimised, or they witness the domestic violence and suffer negative consequences. It is, therefore, critical that the Bill recognises the intersection between gender-based violence and violence against children and ensures that children whose caregivers are victims of domestic violence, are screened and assessed by service providers who are trained to assess children and determine their specific therapeutic needs.

The regulation of facilities and programmes

The Bill proposes that organisations and professionals who provide any form of physical, psychological, social or spiritual services to victims of violent crime must register with the government and meet standards set in regulations.[72] In addition to registering the various programmes that they provide, a shelter will also need to register its premises.[73] If services are not registered, the Bill allows the department to close them down and impose criminal sanctions, including possible imprisonment.[74]

The cost of meeting these standards and completing the registration process is expected to be borne by the individual or organisation providing the service. Many of these organisations are run from private homes in the same communities in which women live. Most survive on private donations while others receive partial funding from government. Therefore, many shelters are unlikely to meet the norms and standards unless provided with adequate financial support prior to full registration. This dual and onerous registration process is currently not working for early childhood development centres and serves as a barrier to the provision of services in disadvantaged neighbourhoods and rural areas.[75] It should therefore not be replicated in this Bill.

Whilst there is a need to strictly regulate services for children who are removed from the care of their families, the situation is different for children accompanying their caregivers who have experienced gender-based violence into shelters. In this instance, the caregiver remains responsible for caring for the child and ensuring that his or her rights are protected and fulfilled. Government's obligation in this instance is to support the service provider financially to enable them to adequately support both caregiver and child.

Protecting victims from secondary victimisation

The Bill recognises the phenomenon of secondary victimisation. This is where someone who has been the victim of violence experiences further trauma because of how they are treated by the system. It is encouraging to see a clear obligation on the Department of Social Development to ensure that victims receive therapeutic services, counselling, court preparation and support. The Bill should make it clear that these services should be extended to children who witness domestic violence.

Conclusion

2021 promises to be a busy year in Parliament with many bills on its agenda, including the Children's Amendment Bill, Domestic Violence Amendment Bill, and the Victim Support and Services Bill. The Department of Home Affairs has several sets of regulations that it needs to get right to uphold vulnerable children's rights to birth registration and nationality, while the Department of Basic Education will be busy with a new School Admissions Policy to ensure inclusion of all children, irrespective of whether documented or not. All these new laws and regulations need to promote the best interests of all children affected and be responsive to the lived reality of children, their caregivers and the many practitioners who provide services to them. This can only be determined by ensuring that these constituencies can meaningfully participate in the law reform process and that their opinions are given serious consideration.

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PART 2

The slow violence of malnutrition

Part two presents nine chapters that outline the challenges facing South Africa's children and opportunities for intervention, including:

- The slow violence of child malnutrition
- A child-centred food system
- Fast-food advertising targeting children
- Maternal nutrition and the unborn child
- Breastfeeding and complementary feeding
- Nutrition and early childhood development
- Nutrition of school-age children and adolescents
- Strengthening social protection to support child nutrition
- Double-duty actions to address a double burden

COVID-19 lockdown disrupted children's access to education and the National School Feeding Programme which provides essential support to over 9 million children.
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Overview

Part two comprises a set of nine chapters that draw attention to the lifelong impact of malnutrition and identify critical points for intervention across the life course.

The slow violence of malnutrition

Chapter 1 describes the nutritional status of South Africa's children, and how stunting, micronutrient deficiencies, overweight and obesity compromise children's health, education and employment prospects. It examines the complex drivers of this double burden of under- and overnutrition, and motivates for early and sustained intervention from a range of sectors to establish a healthy trajectory across the life course.

A child-centred food system

Chapter 2 describes the food system that confronts children and their caregivers, and how this intersects with other systems that affect their nutritional status such as health care, social protection, and water and sanitation. It then identifies both the challenges and opportunities to take action and develop a more healthy, equitable, sustainable and child-centred food system.

Corporate fast-food advertising targeting children

Chapter 3 describes how fast-food companies use persuasive media messages to target and manipulate children's food choices and consumption patterns in ways that compromise their health. It considers the implications for research, policy and programming and calls for greater regulation from the state to protect children from harmful business practices.

Maternal nutrition and the unborn child

Chapter 4 emphasises how child nutrition begins in the womb or even preconception and how the food and nutrition security of pregnant women is essential for the future health of their children. It explores how household food insecurity, micronutrient deficiencies, maternal obesity and gestational diabetes impact the growing child and it identifies opportunities to intervene early address this double burden of malnutrition.

Breastfeeding and complementary feeding

Chapter 5 examines the current status of infant and young child feeding in South Africa. It identifies opportunities to support optimal nutrition through the family, community, workplace and healthcare system, and to actively address the social, cultural and economic barriers that undermine optimal feeding practices.

Nutrition for early childhood development

Chapter 6 describes how good nutrition is essential for both the developing body and brain. It examines the factors that hinder young children's health, growth and neurodevelopment, and it evaluates the extent to which health care services, early childhood development programmes and the social protection system could be better leveraged to enhance the nutrition and food security of young children.

Nutrition interventions in the school years

Chapter 7 focuses on the school years – a period of rapid growth and development, and an opportunity to address shortfalls, consolidate gains and support a healthy transition to adulthood. With nearly universal attendance, schools provide an ideal platform for promoting optimal nutrition. The chapter evaluates a range of interventions currently being delivered through schools, from the National School Nutrition Programme to school tuck shops, food gardens, nutrition education, sport and physical activity.

A child-centred approach to social protection

Chapter 8 looks at the role of social protection in contributing to food security in South Africa, particularly as it relates to the nutrition security of children. In addition to social protection measures that directly target children, it also considers others, such as the COVID-19 relief grants, that may indirectly impact children. This is especially important during and after the COVID-19 pandemic, where a weaker economy has drastically reduced income opportunities for the poor. The impact of these dynamics on children in South Africa, already the most unequal society in the world, must as far as possible be anticipated and prevented by focused and creative action.

Double-duty actions to address a double burden

Chapter 9 promotes the use of double-duty actions to address the double burden of under- and overnutrition and to maximise synergies and efficiencies by promoting effective integrated action. The chapter evaluates a range of existing policies and programmes and considers how they could be amended or retrofitted to address the double burden of malnutrition.

Glossary of key terms

Double burden of malnutrition: a term used to characterise the coexistence of under- and overnutrition. Different forms of malnutrition can coexist in individuals, households, cities and countries. For example, a country can have high levels of both anaemia and obesity, and a child can suffer from both stunting and overweight. The term 'triple burden' is sometimes used to place emphasis on micronutrient deficiencies.

Double-duty actions: interventions, programmes and policies have the potential to simultaneously reduce the risk or burden of undernutrition (including wasting, stunting and micronutrient deficiency or insufficiency) and overweight, obesity or diet-related non-communicable diseases.

Equity and inequity: equity focuses on opportunities rather than outcomes and encompasses the idea of fairness or justice. Inequity adds a moral dimension and can be defined as 'unfairness of opportunity', or lack of equitable access to systems and processes that structure everyday conditions, leading to inequalities (or unequal outcomes/consequences). In other words, equality of opportunity, or equity, influences equality of outcome. Nutrition equity focuses on opportunities and barriers within food, health and social protection systems that affect access to healthy, affordable food, and quality nutrition care, and lead to unequal nutrition outcomes (or nutrition inequalities).

Food environment: the physical, economic, political and sociocultural contexts that affect the accessibility, availability, affordability and cultural/sensory perceptions of food. This in turn influences people's food choices and their nutritional status.

Food system: all the elements (including environment, people, inputs, processes, infrastructures and institutions) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socioeconomic and environmental outcomes.

Food value chains: the economic process of producing food, including farming and processing, and disposal of any waste or packaging. Sustainable food value chains do this in a way that ensures broad benefits for society and considers wider environmental impacts.

Hidden hunger: a lack of vitamins and minerals. This occurs when the quality of food people eat does not meet their nutrient requirements, so the food is deficient in micronutrients they need for their growth and development. While multiple micronutrients are needed, iodine, vitamin A, iron and zinc are considered to be the most important given their impact on the health of women of child-bearing age, pregnant women, infants and young children.

Inequality: Inequality refers to differences, variations and disparities in health and living conditions among people (individuals and population groups) that are the outcome (or consequence) of unjust systems and processes that structure everyday conditions. Nutrition inequalities are differences in people's nutritional outcomes, such as dietary intake, nutritional status and related conditions/diseases, influenced for example by location, age, gender, ethnicity and wealth.

Malnutrition: a range of diet-related conditions caused by not having adequate calories, nutrients or healthy food (undernutrition), or having too much unhealthy food (overnutrition).

Micronutrient deficiencies: a form of malnutrition caused by insufficient intake of vitamins and minerals (such as zinc, iron, iodine and vitamin A) that are essential for proper growth and development.

Overnutrition: a form of malnutrition caused by the consumption of too much energy, and not enough exercise which can manifest as overweight, obesity and diet-related non-communicable diseases (e.g. diabetes, cardiovascular disease and certain types of cancer).

Overweight and obesity: are measured differently depending on the age of the child. Children under five years old are overweight when their weight-for-height is greater than two standard deviations above the median of the reference population; and obese when their weight-for-height is more than three standard deviations above the median of the reference population. Body mass index (BMI) is used to measure overweight or obesity in older children. Children (aged 5-19 years) are overweight if their BMI is more than one standard deviation above the normal BMI for their age, and obese if their BMI is more than two standard deviation above the normal BMI for their age.

Stunting: Low height-for age is a sign of impaired growth and development caused by chronic malnutrition, repeated infection and inadequate psychosocial stimulation. Children are stunted when their length- or height-for-age is more than two standard deviations below the the median of the reference population.

Undernutrition: a form of malnutrition caused by insufficient intake of energy and nutrients, and it can manifest in the form of stunting, wasting, underweight or micronutrient deficiencies.

Underweight: Low weight-for-age is a sign of acute or chronic malnutrition. Children are underweight when their weight-for-age is more than two standard deviations below the the median of the reference population.

Wasting: Low weight-for-height is a sign of recent (acute) and severe weight loss which may be caused by an infectious disease (such as diarrhoea) or not enough food to eat. Children are wasted when their weight-for-height is more than two standard deviations below the median of the reference population.

The slow violence of malnutrition

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"A simple vote, without food, shelter and health care is to use first generation rights as a smokescreen to obscure the deep underlying forces which dehumanise people. It is to create an appearance of equality and justice, while by implication socio-economic inequality is entrenched. We do not want freedom without bread, nor do we want bread without freedom. We must provide for all the fundamental rights and freedoms associated with a democratic society."

Nelson Mandela[1]

Over the past two decades, South Africa has adopted a broad array of food and nutrition policies to improve the food and nutrition security of children. However, most indicators show disappointing results. While self-reported hunger of children has declined, stunting (an indicator of chronic undernutrition) remains exceptionally high for an upper middle-income country.[2] This has been accompanied by an increase in child and adolescent overweight and obesity, which is driving a growing burden of diet-related non-communicable diseases (NCDs).

With one of the largest economies and higher stunting levels than some of its poorer African neighbours, South Africa's child food and nutrition insecurity is linked to the grotesque inequities that characterise the country and which must be addressed with urgency. They reflect a slow, hidden and cumulative violence against South Africa's children that is in conflict with the country's Bill of Rights and Constitution and is a violation of their rights.

The term "slow violence" was initially used to describe the gradual, often invisible, but ultimately devastating impact of climate change and deforestation on the environment and poor communities.[3] Reflecting on the impact of COVID-19 in the context of persistent hunger in South Africa's cities, Gareth Haysom challenged society to recognise the "slow violence" of hunger and food insecurity that is also often "experienced in private, incremental and accretive ways – that are often invisible"[4] (see Box 1).

In this issue of the *South African Child Gauge*, we use the concept of slow violence to illustrate how food and nutrition insecurity during childhood is a silent threat to human development that casts a long shadow across the life course and contributes towards the intergenerational transfer of poverty, malnutrition and ill-health.

The influential 2020 Global Nutrition Report (GNR) also recognises the importance of intervening early in a child's life course to prevent the double burden of undernutrition and overweight/obesity. The GNR shows how food and nutrition insecurity hampers physiological and social development, exerts additional health costs, prevents children from achieving their full potential and perpetuates an intergenerational cycle of poverty.[5] It also describes how the double burden of malnutrition contributes to diet-related non-communicable diseases (NCDs) such as diabetes, cardiovascular diseases and certain cancers, and calls for double-duty actions to reduce both undernutrition and overweight.

Drawing on national and international sources of data, the GNR reports that South Africa is on course to meet global nutrition targets, by 2025, for wasting (reduce and maintain childhood wasting to less than 5%) and overweight (no increase in childhood overweight) amongst children under-five. No progress has been made with under-five stunting, low birth weight, adult obesity and adult diabetes, and limited progress with the anaemia prevalence of women of

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reproductive age. The 2016 South African Demographic and Health Survey (SADHS) suggests that encouraging progress has been made with increasing exclusive breastfeeding in the first six months. However, at 32%, this is way below the target to meet the Global Nutrition 2025 target of increasing the rate of exclusive breastfeeding in the first six months up to at least 50%. Of increasing concern is that South Africa, like several other countries is experiencing an upward trend in overweight and obesity.[6]

Table 1 provides an overview of national data collected between 1999 and 2016. The trend of several indicators is disheartening. South Africa's stunting rate has remained stubbornly high above the 20% mark, unlike several other low- and middle-income countries such as Rwanda, which successfully decreased its stunting level from 44% in 2010 to 38% in 2015, and far short of the successes achieved in Brazil and Peru.[5]

The adolescent and adult nutrition profile (Table 2) mirrors the poor child health and nutrition profile. Preconception nutrition status and nutrition during pregnancy impact future child health and nutrition and fuels the intergenerational malnutrition cycle. While teenage pregnancy is low, most women have their first child before age 22,[6] and 30.7% of pregnant women are HIV positive[7]. From the data presented in Table 1, it is evident that there is a gender-bias of a worse trajectory for the female child. These indicators continue to deteriorate into adulthood with adult women in South Africa more overweight and obese than their male counterparts.

The position of South Africa's double burden of malnutrition relative to global trends can be seen in Figure 1 and confirms the country's poor performance relative to other middle-income countries.

With less than five years to achieve the United Nations Global Nutrition Targets, South Africa has a mixed report card on child nutrition. Despite South Africa's middle-income status and the per capita spend on health, these indicators are at best stagnant with many worsening, not unexpectedly given the level of inequality reflected in high

Table 1: Indicators of children's nutrition status, 1998 – 2016

		NFCS 1999 1 – 9 years	SADHS 2003 < 5 years	NFCS-FB 2005 1 – 9 years	SANHANES 2012 < 5 years	SADHS 2016 < 5 years
●	Wasting	3.7%	5.2%	4.5%	2.9%	2.5%
●	Underweight	10.3%	11.5%	9.3%	5.8%	6%
●	Stunting	25.5% (1-3 years)	27.4%	23.4% (1-3 years)	26.5% (1-3 years)	27% (<5 years)
●	Overweight	12.4%	Not reported	10.6%	16.5% (girls) 11.5% (boys)	13.3%
●	Obesity	6.6%	Not reported	4.8%	7.1% (girls) 4.7% (boys)	Not reported
●	Vitamin A deficiency	Not reported	Not reported	64%	43.6%	Not reported
●	Zinc deficiency	Not reported	Not reported	45%	Not reported	Not reported
●	Iron deficiency and iron deficiency anaemia	Not reported	Not reported	20%	10%	Not reported
●	Iodine deficiency	Not reported	Not reported	15%	Not reported	Not reported

● No progress ● Progress made ● Target achieved

Sources: Labadarios D, ed. 2000. National Food Consumption Survey (NFCS): Children aged 1-9 years, South Africa, 1999. Directorate of Nutrition, DOH. Stellenbosch, University of Stellenbosch.
Department of Health, Medical Research Council, OrcMacro. (2007). *South Africa Demographic and Health Survey 2003.*
Kruger HS, Swart R, Labadarios D, Dannhauser A, Nel JH 2007. Anthropometric status. In: Labadarios D, ed. National Food Consumption Survey-Fortification Baseline (NFCS-FB): South Africa, 2005. Directorate Nutrition, DOH. Stellenbosch, University of Stellenbosch.
Shisana O, Labadarios D, Rehle T, Simbayi L, Zuma K, Dhansay A, Reddy P, Parker W, Hoosain E, Naidoo P & Hongoro C (2013) *South African National Health and Nutrition Examination Survey (SANHANES-1).* Cape Town: HSRC Press.
Department of Health, Statistics South Africa, Medical Research Council & ICF (2017) *South African Demographic Health Survey 2016. Key Indicator Report.* Pretoria: DOH, Stats SA, MRC & ICF
Note: N/A: not available.

Table 2. Adolescent and adult nutrition indicators, 1998 – 2016

	SADHS 1998	SADHS 2003	SADHS 2016
Underweight	15 – 19 years 28.0% male 12.0% female	15 – 19 years 29.0% male 12.0 female	15 – 19 years 20.7% male 6.7% female
Overweight	15 – 19 years 4.8% male 17.6% female	15 – 19 years 8.2% male 16.2% female	15 – 19 years 6.1% male 16.7% female
Obesity	15 – 19 years 0.02% male 0.06% female	15 – 19 years 0.4% male 7.5% female	15 – 19 years 2.5% male 10.9% female
Anaemia <13g/dl males <12g/dl females	Not reported	Not reported	15 – 19 years 17.2% male 34.0% female
Hypertension ≥140/≥90mmHg	15 – 19 years 7% male 5% female	Not reported	15 – 24 years 20% male 17% female
Diabetes[1]	Not reported	Not reported	15 – 19 years 1% male 2% female

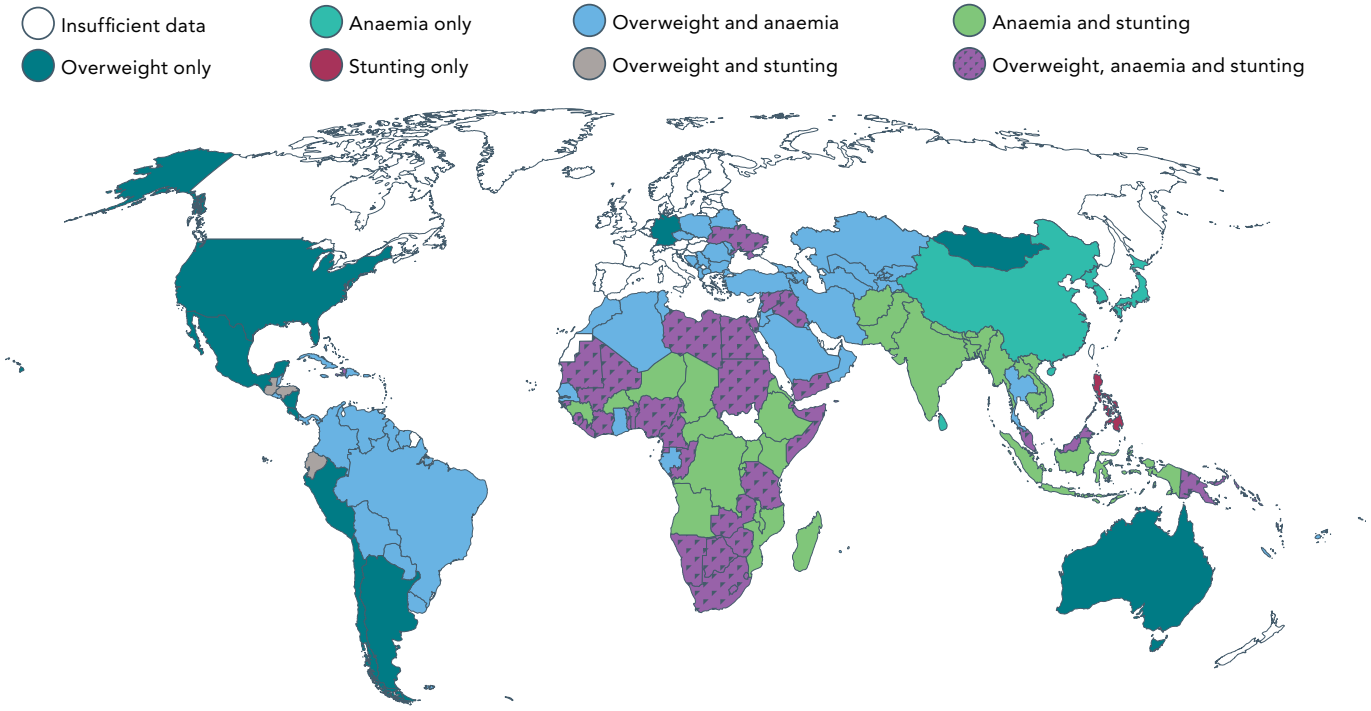
Sources: Department of Health, 1998. *South Africa Demographic and Health Survey 1998.*
Department of Health, Medical Research Council, OrcMacro. (2007). *South Africa Demographic and Health Survey 2003.*
Department of Health, Statistics South Africa, Medical Research Council & ICF (2017) *South African Demographic Health Survey 2016. Key Indicator Report.* Pretoria: DOH, Stats SA, MRC & ICF.
Notes: N/A: not available. While diabetes is not of public health significance amongst youth, prevalence increases dramatically with age and BMI, with women most at risk.

Gini coefficient for South Africa at 0.65 points in 2015.[8] Furthermore, the COVID-19 pandemic and economic recession are likely to have an unprecedented impact on food and nutrition security globally and in South Africa. A preliminary assessment by the UN Food and Agricultural Organization (FAO) suggests the pandemic may add between 83 and 132 million people globally to the total number of undernourished in 2020 as a result of loss of income and livelihoods.[9] The John Hopkins University Bloomberg School of Public Health projected an additional 1.2 million young child deaths in 2020 due to the disruption of essential maternal and child health services, coupled with growing food insecurity[10].

An effective response to this situation would have substantial social and economic returns. The immediate benefits of improving the food security, dietary diversity and nutrient consumption of children are known.[11] The long-term societal benefits are more difficult to measure accurately but are of equal importance. Recognising this, international efforts are underway to collect better data in order to more clearly demonstrate the impact of nutrition focused and nutrition sensitive policy.[12] Nonetheless, even with insufficient data, the Global Nutrition Report of 2014 estimates a return of R16 for every R1 invested in nutrition interventions for all age groups.[13] The benefits of interventions focusing on children are likely to exceed this, and follow from strengthened immune systems, improved physical and cognitive ability, better performance in school, and ultimately in improved health and economic capacity in adult life.

This chapter introduces the concepts of food and nutrition security and describes the life-course approach that underpins the *Child Gauge,* locating this within the food system and reflecting on the impact of COVID-19. It provides an overview of the food security and nutrition profile of South Africa's children outlining the double burden of under- and overnutrition, and motivates for early and sustained intervention across the life course in order to disrupt the intergenerational transmission of malnutrition, poverty and ill health. It then draws on the concepts of food and nutrition security to identify the determinants of malnutrition within the broader food system, highlighting the need for both nutrition-specific and sensitive interventions. Finally, the chapter discusses children's rights to food and nutrition, and reflects on opportunities to strengthen policy and programming.

Figure 1: Map of childhood stunting and anaemia and overweight in adult women, 2017 and 2018



Source: UNICEF/WHO/World Bank Group. Joint child malnutrition estimates. NCD Risk Factor Collaboration. WHO Global Health Observatory.
Notes: Stunting in children aged under 5 years ≥ 20%; anaemia in women of reproductive age ≥ 20%; overweight (body mass index ≥ 25) in adult women aged ≥ 18 years ≥ 20%. Based on data for 141 countries.

How does the double burden of malnutrition change across the life course?

Although adequate nutrition is important throughout childhood, the first 1,000 days (from conception until two years of age) are especially important for the first of these burdens: undernutrition. Human development is most rapid during this period of a child's life course, especially the development of the immune system and cognitive ability.

Maternal nutrition

The many pregnant women at risk of food insecurity in South Africa are therefore the first manifestation of slow violence: In 2012/13, 17% of mothers reported that they had experienced a depletion of food in the 12 months prior to visiting an antenatal clinic[14] and there is increasing evidence linking food insecurity and postnatal depression,[15] which compromises the ability of mothers to feed and care for their children. Pregnancy in adolescence and HIV-infection put the pregnant mother and her unborn child at additional risk of poor birth and health outcomes.

While South Africa does not have national level data of micronutrient status of pregnant women, one in three women of child-bearing age experience anaemia. Micronutrient deficiencies are likely to be even higher among pregnant women. As first proposed in the Barker hypothesis, adverse nutrition in early life (including during the antenatal period as measured by low birth weight) increases the risk of obesity, diabetes, insulin insensitivity, hypertension, high cholesterol and complications that include coronary heart disease and stroke.[16]

In developing countries, the progression to obesity and associated morbidity appears to be dependent on the interaction between birth weight and subsequent growth during critical, developmental windows. This has been described as a "thrifty phenotype". Researchers in the Birth-to-Ten study, a prospective cohort study of the determinants of growth, development and health in children born in the metropolitan area of Soweto and Johannesburg between April and June 1990, found that children with low birth weight were more likely to exhibit rapid weight gain culminating in increased obesity, raised blood pressure and glucose intolerance.[17]

Low birth weight

Low birth weight (below 2.5kg) is the first challenge to be confronted by caregivers and has been estimated to affect 15% of births nationally.[6] This includes children born before 37 weeks gestation (preterm) and those who are small for gestational age. Low birth weight is an important predictor of malnutrition in childhood. Infant mortality risk is highest in the

first month of life and South Africa continues to struggle with a stubbornly high neonatal mortality rate of 12 deaths per 1,000 live births. Amongst the causes of neonatal mortality are prematurity, asphyxia and sepsis.[18] The former being a poor birth outcome related to maternal health and nutrition status and the latter to the infant's immune status – which underpins the importance of immediate and early initiation of breastfeeding within one hour of birth.

Infant and young child feeding

Exclusive breastfeeding during the first six months following birth is a key protective factor for child survival, cognitive development and protection against NCDs in the adult years.[19] However, South African surveys have repeatedly shown a low prevalence of exclusive breastfeeding, with the most recent SADHS reporting that just 32% of infants below the age of six months were exclusively breastfed in 2016.[6]

Many women stop exclusive breastfeeding prematurely due to food insecurity, a hostile home environment, and inadequate support from their workplace and the health care system.[20, 21] Poor feeding practices contribute to particularly high levels of stunting (32%) during the first six months of life

These challenges continue into the second year of life, with only 23% of infants aged 6 – 24 months reported to have consumed a minimum acceptable diet (a composite measure of dietary diversity and food frequency). Inappropriate complementary feeding practices are associated with overweight and obesity in childhood and later in puberty; and formula feeding has been identified as a possible cause of subsequent overweight.[19]

Wasting

South Africa's low prevalence of wasting (2.5%) is not of public health significance and shows signs of improving, yet 48% of hospital deaths are associated with moderate or severe acute malnutrition (SAM).[22] There are concerns that COVID-19 and the associated lockdown and recession has intensified child hunger and malnutrition – so there is an urgent need to strengthen growth monitoring systems to ensure the early identification and treatment of infants and young children with SAM (see case 15).

Stunting

Levels of chronic undernutrition have remained high since 1993 when the Project on Statistics on Development and Living Standards (PSLDS) reported a stunting prevalence of 30.2% of children under 5 years of age, with the most recent estimate of the 2016 SADHS reporting a prevalence of 27%.[6] When the confidence intervals of these and other studies are considered, it appears that there has been no progress from 1993 to 2016. Stunting can have a profound impact on long term health and development and is associated with impaired health, educational and economic performance in later life, as well as intergenerational transfers with women who had been stunted themselves giving birth to low birthweight children.[23] There are also concerns over long-term consequences for the development of the immune system.[24]

Hunger

Given the persistence of stunting, it seems contradictory that children living in households reporting child hunger have fallen from 30% in 2002 to 11% in 2018. Yet this is a highly subjective measure reported at household level and does not provide any indication of whether children are consuming a diet that is sufficiently diverse and dense in nutrients to support healthy growth and development.

Poverty, unemployment and hunger rose dramatically under hard COVID-19 related lockdown, with 47% of households running out of money to buy food in May/June 2020, while child and adult hunger increased to 15% and 22%.[25] By July/August, following the introduction of the caregiver and COVID-19 relief grants, this had declined to 37%. Yet levels of hunger and food insecurity remain significantly higher than pre-COVID-19 levels.[26] Food prices rose dramatically – before, during and post-lockdown – with a basic Household Food Basket in Pietermaritzburg costing R3,554.64 in November 2020, an increase of 14.4% from R3,106.42 in November 2019.[27] This was accompanied by the loss of COVID-19 relief grants at the end of November, cutting deep just ahead of Christmas and the closure of schools, with women testifying how:

> *"Children eat the same food every day. Starch every day. Starch every day. Starch every day. People are not okay. It is not healthy to eat starch every day. We do want to eat right but we don't have a choice. We can only buy the basic foods now. We buy the same things over and over again. We have no choice; we have to survive."*

Du Noon, Cape Town, November 2020

Maternal buffering

The extent and impact of maternal buffering (when mothers act as "shock absorbers", deliberately limiting their own consumption to ensure that children have enough to eat) emerged as a coping strategy during the COVID-19 lockdown.[25] Prior to this, small sample surveys found that over three-quarters of mothers adopted this strategy over a five-day recall period.[28] It is also possible that mothers may be eating inexpensive, energy dense food as a coping strategy during episodes of poverty, as well as feeding their children such foods so that they feel sated, increasing both of their risks of becoming overweight or obese.

Micronutrient deficiencies

Hidden hunger or micronutrient deficiencies compromise children's immune systems and cognitive development and increase their risk of morbidity and mortality. Public health strategies to address micronutrient deficiencies include supplementation, food fortification and food diversification. South Africa introduced salt iodisation in 1998 to virtually eliminate iodine deficiency; fortification of maize meal, bread and bread flour (in 2003) to address vitamin A and iron deficiency; routine vitamin A supplementation, and the use of zinc supplements to treat diarrhoea.

The prevalence of vitamin A deficiency (VAD) among South African children under the age of five years has reportedly declined from 64% of children 1 – 6 years in 1999[29] to 43.6% of children under five in 2013[30]. Nonetheless, VAD is still severe according to the WHO criteria, contributing to up to 23% of childhood mortality, despite a supplementation programme introduced in 2002 and a wheat flour and maize meal fortification programme introduced in 2003.

Other forms of micronutrient deficiency are also of concern. The 2005 National Food Fortification Baseline Survey found that 44% of children aged 1 – 9 years had inadequate zinc status and were therefore at risk of zinc deficiency, 25% an iron deficiency and 15% an iodine deficiency.[30] Given the increased cost of the food basket and the negative impact of the COVID-19 pandemic and subsequent economic recession, it is expected that the micronutrient quality of children's diets will further deteriorate.

Multiple malnutrition

In addition to hidden hunger, multiple malnutrition has been identified as an emerging trend in many countries.[13] This refers to overlapping burdens of stunting, wasting, and overweight, or a concurrent double burden of malnutrition. At the level of the individual, these burdens can occur concurrently, for example, stunting and wasting, or stunting and overweight;[31] and sequentially over the life course, where stunted children may become obese adolescents[32]. This underpins the call for early and sustained investment into addressing food and nutrition security during the first 1,000 days, the most critical and time-sensitive window of opportunity.

Stunting in childhood predisposes overweight and obesity in adolescence and adulthood. Increased overweight and obesity among adolescents raises concerns about their immediate health and well-being, their increased risk of developing NCDs and the compromised preconception health and nutrition of the next generation of children.

Obesity and stunting are linked and often found in the same household. Wave One of the National Income Dynamics Study (NIDS) undertaken in 2008 found that there is at least one obese adult in 45% of households with a stunted child, and an underweight child in 37% of households with at least one obese adult. Overall, NIDS found that there is both an overweight adult and an undernourished child in one out of every eight South African households.[33]

Overweight and obesity

The SADHS 2016 found that 13% of children under-five were overweight or obese. Overnutrition increased with age with a strong gender bias emerging in late teens, where 8.6% of young men and 26.8% of young women were overweight or obese. Prevalence of overweight and obesity among all women has also increased over time, from 56% in 1998 to 68% in 2016, with the highest rates of overweight and obesity (81-82%) in women aged 45 – 60 years.[6]

Adolescent nutrition

A review on adolescent nutrition in South Africa[34] reported that girls and urban-dwellers were particularly vulnerable to obesity and that dietary intakes demonstrated a transition towards energy-dense, processed foods high in sugar and fat, but low in essential micronutrients. Food choices were driven by the adoption of obesogenic behaviours in the teenage years, including irregular breakfast consumption and fewer family meals, increased snacking and low levels of physical activity. According to the 2016 SADHS, one-third (34%) of girls and 17.2% of boys 15 years and older were anaemic. One-third of the adolescents ate salty snacks daily, while fruit and vegetable intakes were generally low and decreased from the highest to lowest household wealth categories.[6]

Obesity prevalence is increasing, especially in the adult female population, contributing substantially to the burgeoning burden of NCDs such as hypertension and

diabetes. Amongst females this has a negative impact on pregnancy and birth outcomes, increasing the risk of pre-term deliveries, low birth weight and maternal mortality.[35]

HIV

South Africa has the largest HIV epidemic and treatment programme in the world. While HIV incidence is declining, adolescent girls and young women aged 15 – 24 are three times more likely to become HIV infected than young men. New HIV infections in young women contribute to one-third of all new HIV infections in adults 15 – 49.[36]

Intergenerational relationships between older men, a group with high HIV prevalence, and young women are understood to be driving HIV infection among young women and are underpinned by poverty and food insecurity. Young pregnant women also tend to have reduced access to HIV prevention interventions, compromising their health and that of their unborn infants.

While South Africa has made strides in eliminating mother-to-child transmission of HIV, 30.7% of pregnant women are HIV positive[7] and an estimated 20.5% of infants are HIV-uninfected yet exposed to HIV and antiretroviral drugs.[37] This increases their risk of low birth weight and severe infection, raising concerns about the long-term health and development of one in five young children.[38] Greater effort is also needed to ensure that HIV positive children can access treatment as only 51.9% of HIV-infected children were virally suppressed in 2017.[36]

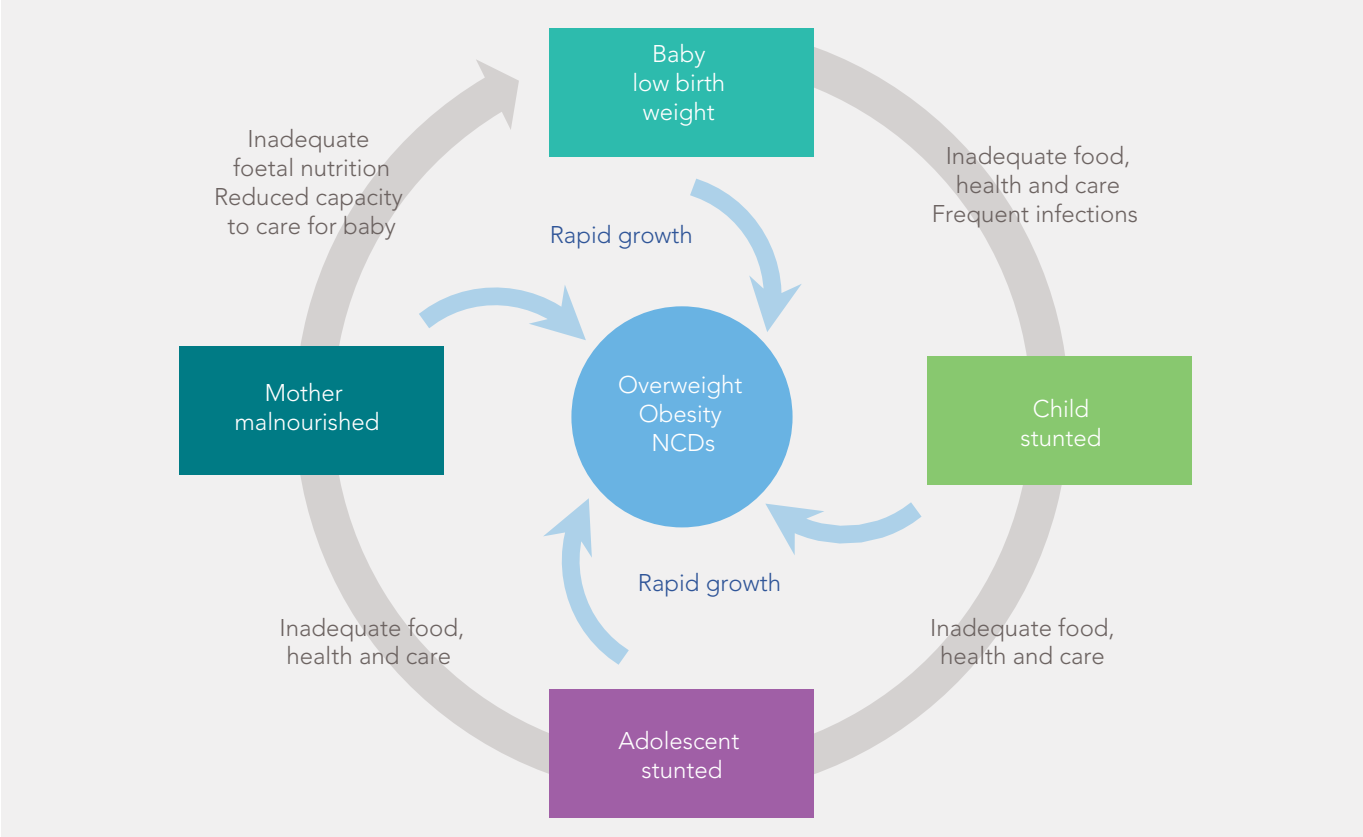
Why is important to adopt a life-course approach?

The above analysis together with a growing body of interdisciplinary research into the developmental origins of health and disease illustrates how exposure to certain environmental influences and physiological stressors during sensitive periods of development (even preconception) can have significant impact on an individual's short- and long-term health and development.[39]

The life-course approach to nutrition therefore recognises that there are critical time points in physiological development – from foetus to adulthood – that require specific types of nutrition and support, as any shortcomings and deficiencies during these sensitive periods of development can have irreversible consequences for health and development.

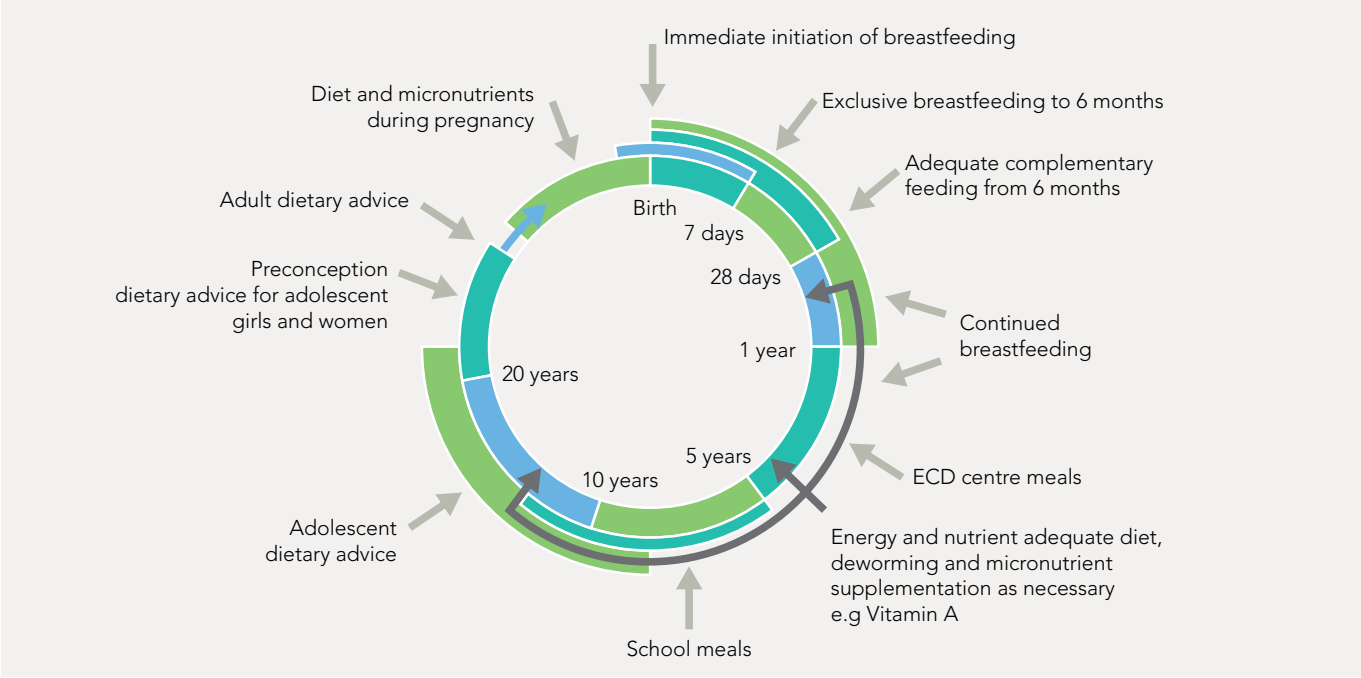
This is particularly important during the first 1,000 days of life – from conception to a child's second birthday – and again during adolescence as it helps shape adult patterns of behaviour and the health of the next generation of children.

Figure 2. The impact of malnutrition across the life course



Adapted from: Branca F, Piwoz E, Schultink W, Sullivan LM. Nutrition and health in women, children, and adolescent girls *British Medical Journal*, 2015; 351: h4173

Figure 3: Specific interventions to improve nutrition across the life course



Adapted from: Branca F, Piwoz E, Schultink W, Sullivan LM. Nutrition and health in women, children, and adolescent girls *British Medical Journal*, 2015; 351 :h4173

Figure 2 shows that there are different drivers of the double burden of malnutrition at each stage of the child's life course. Furthermore, food and nutrition insecurity experienced at one stage has consequences for subsequent stages, and ultimately for the health of the next generation of children. The approach is useful when examining the situation of children because demographic, social and historical time places limits on their opportunities and trajectories. The COVID-19 pandemic and the subsequent lockdown are good examples of a period in which the food and nutrition security of children has been placed under particular stress. This included the cessation of school feeding programme in most parts of South Africa, the loss of jobs and livelihoods, and the disruption of the food system, including the prohibition of informal trading during the initial phases of lockdown.

Different responses to avoid or to mitigate food and nutrition risks are therefore required at different stages of development as outlined in Figure 3.

Immediately after birth, nutrition interventions must target breastfeeding, recognising the crucial role that this plays in the first 1,000 days of a child's life. From the age of six months, emphasis shifts towards ensuring that the transition to solid foods is accompanied by consumption of a balanced diet that avoids excessive consumption of sugar and fat. The adolescent phase is a period in which the risk of overweight and obesity is particularly important. Finally, as the adolescent transitions into adulthood, the focus should shift to avoiding an intergenerational transfer of diet-related disease to the next generation. Throughout this cycle, effort is needed to address the double burden of malnutrition, to extend beyond nutrition-specific interventions to include other forms of care and support, and to address the drivers of over- and undernutrition.

What are the key drivers of over- and undernutrition?

The changing burden of malnutrition is shaped in fundamental ways by the broader food system. The concepts of food and nutrition security help draw attention to the key drivers of malnutrition and how individual food choices are shaped by broader social and economic forces.

Food security

Although there are many definitions of food security, the most authoritative and widely used is that of FAO's State of Food Insecurity (SOFI) report:

> *"Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life."*[40]

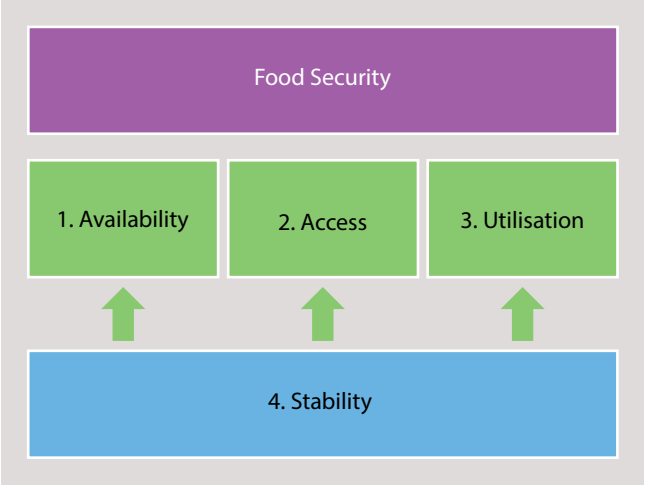
This approach sees food security as possessing four dimensions – availability, accessibility, utilization and stability, as outlined in Box 2.[42] All four of these dimensions need to be fulfilled simultaneously, yet they are also hierarchical in nature: for example, food availability is necessary but not sufficient for access to food at household level; access is necessary but not sufficient for utilization; and stability is necessary but not sufficient for utilization.[42]

A shortcoming of this approach is that the nature of the food system is given little attention and the linkages between food and nutrition security, diet, poverty and inequality are not detailed. It also neglects interactions between the different dimensions of food insecurity, and the dynamics and terms under which different actors, especially woman and children, are included into the system. As a result, there is a risk that drivers of food insecurity that emanate from outside of the food system might be neglected. These include racism, discrimination and patriarchy.

Nutrition security

Nutrition security is a more inclusive concept that includes dimensions that are not fully considered by the FAO definition. Nutrition security exists when secure access to an appropriately nutritious diet is coupled with a sanitary environment, adequate health services and care, to ensure a healthy and active life for all household members.[41] It also recognises that nurturing care is especially important during childhood, and that the nature of that care changes during the life course. This is especially important during childhood when inadequate and inappropriate diets at critical time-points in physiological development can have irreversible consequences on long-term health and development.

Figure 4: The four dimensions of food security



Adapted from: Food & Agriculture Organization (2008) *An Introduction to the Basic Concepts of Food Security. Food Security Information for Action Practical Guides.* Rome: FAO.

Box 1: The four dimensions of food security

- **Availability**: refers to the physical supply of food at a national or regional level which is determined by food production, stocks and trade.
- **Access**: refers to the ability of households to secure access to sufficient nutritious food either through their own production or by purchasing food. Access is therefore shaped by the local food environment, food prices and household income which can have a profound impact on food security at a household level.
- **Utilisation**: refers to nutritional uptake and describes an individual's ability to consume and make use of sufficient energy and nutrients. It is shaped by health, care and feeding practices, including food preferences, dietary diversity, food safety, access to safe water, sanitation and health care services.
- **Stability**: highlights the need for secure and sustainable access to nutritious food over time despite shocks such as conflict, drought, unemployment or rising food prices.

There are significant differences in the policy recommendations that follow from the food security and nutrition conceptual frameworks. While the food security framework tends to emphasise an economic approach, with a central focus on food as a commodity, and increased production and market efficiencies as the solution, the nutrition framework adopts a biological approach in which the human being is the starting point. Solutions include better health services, improved access to care and the empowerment of women. However, both frameworks have in common the promotion of an interdisciplinary and intersectoral approach to ensuring food and nutrition security and are brought together in recent efforts to balance the focus on food availability and the manner in which food is used.

Agency and sustainability

A draft report released for public debate in 2020 by the High-Level Panel of Experts that advises the Committee on World Food Security proposed the inclusion of two additional dimensions to the FAO's definition: agency and sustainability.

- **Agency** highlights the importance of greater food sovereignty in which producers and consumers have control over the food that they produce or eat. It also recognises issues of food justice and aims to address

prevailing inequities in the food system: inequalities that are avoidable, unnecessary and unjust. Agency implies building the capacity of historically disadvantaged individuals and marginalised communities (including children, women, small producers, informal businesses) to define and secure their desired food systems and nutritional outcomes, and to engage in food system policies and processes.[43]

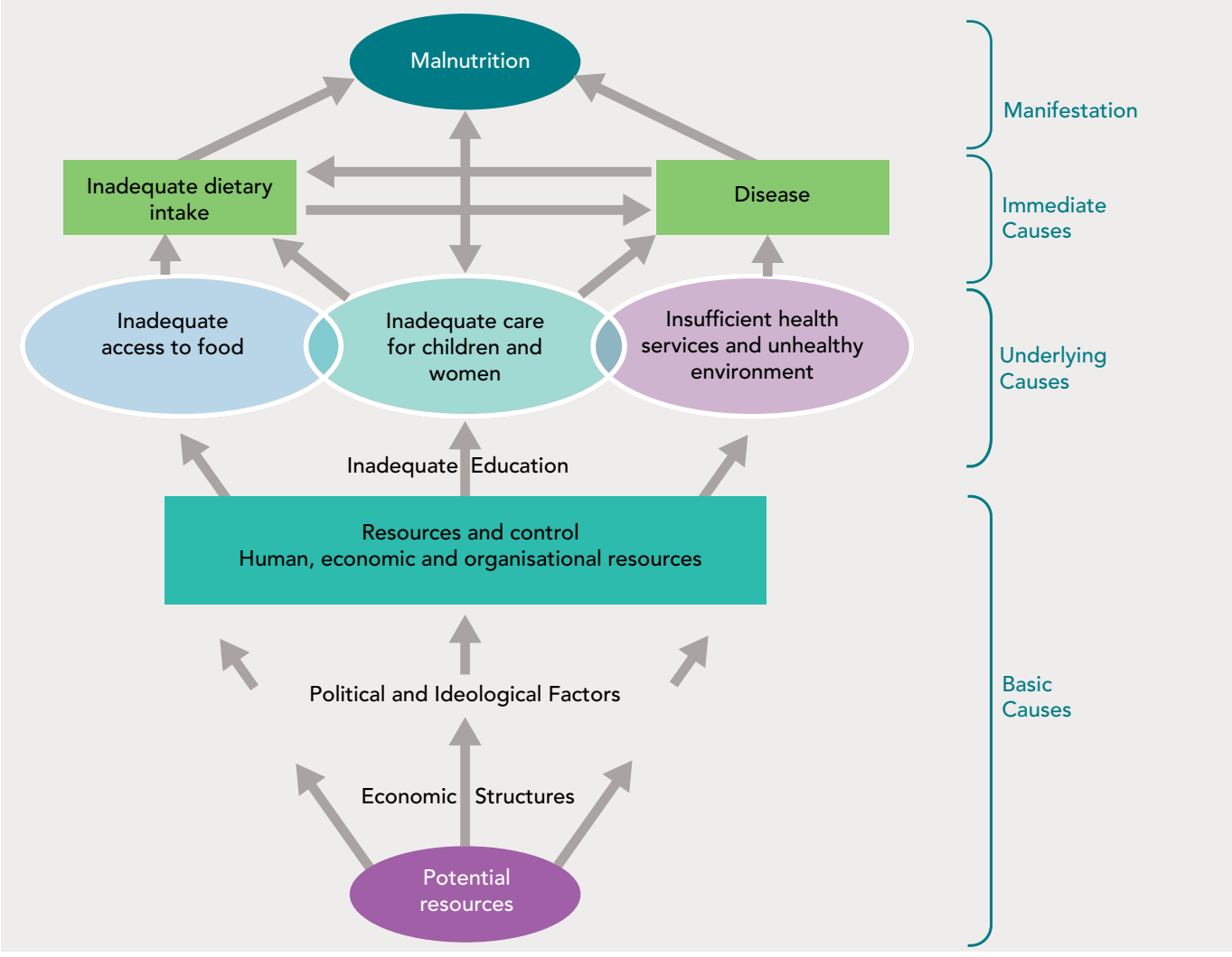
- **Sustainability** refers to food system practices that protect and regenerate the natural environment over the long term. This includes both the promotion of environmentally sustainable systems of food production, processing and distribution, and the adoption of sustainable diets.

A multidimensional approach

In this issue of the *Child Gauge*, food and nutrition security are presented as multi-dimensional. They involve both the consumption of too little, and too much food; the types of diet that are available and affordable; care arrangements and the physical environment; and issues of food safety and knowledge about the preparation of food. In addition, we recognise that the intensity of food and nutrition insecurity varies, and individuals may experience multiple forms of deprivations that may intersect and reinforce one another. Furthermore, the duration of episodes of food and nutrition insecurity also vary over the life course, as do their consequences. Finally, as a human right, there is culpability for the production of food and nutrition insecurity, and a duty to ensure their reduction.

Food and nutrition security are central to the achievement of the Sustainable Development Goals (SDGs) adopted by 193 countries around the world in 2015, including South Africa. SDG 2 (Zero Hunger) is directly relevant, but food and nutrition security is also dependent on the achievement of many other SDGs including SDG1 (Ending Poverty), SDG 3 (Good Health

Figure 5: UNICEF Framework of Malnutrition



Adapted from: UNICEF. Strategy for improved nutrition of children and women in developing countries. UNICEF, New York, June 1990

Case 1: Changes in food consumption patterns across the life course and impact on health and growth: Findings from the Birth-to-Twenty Plus cohort study

Rihlat Said Mohamed, Douglas Momberg & Shane A Norris[i]

Since its inception in 1990, the Soweto Birth-to-Twenty Plus cohort (BT20+) has tracked the impact of social, demographic, economic and epidemiologic changes on the health and well-being of children and their mothers.[1] While a myriad of genetic, behavioural and environmental factors interplay and impact on human development and health, this case focuses on longitudinal changes in food consumption and their impact on growth and development from birth to adolescence.

Infancy (1990 – 1993)

Over the last 30 years, policies, programmes and recommendations on infant and young child feeding practices in South Africa have changed, impacting stakeholders' knowledge and practices.[80] In the 1990s, when BT20+ participants were born, mothers were encouraged to breastfeed exclusively until 4 – 6 months, in a context of an extremely low national rate of exclusive breastfeeding (EBF) (see Table 1).[80, 81] While 96% of the BT20+ children were breastfed at least once, the median duration of breastfeeding was 13 months.[81-83]

Ninety-six percent of BT20+ infants were introduced to solid foods before 6 months old. At one year of age, they had good dietary diversity with a consumption per week of 32 different food items and 10 food groups out of 11 categories (dairy and by-products; grains, cereals, and starch; meat and fish; legumes, nuts, and by-products; vegetables rich in vitamin A; other vegetables; fats and oil; fruits; sweets and sweeten beverages; eggs; miscellaneous) adapted from those recommended by the Food and Agriculture Organisation (FAO).[83] The 10 most frequently consumed food items were commercial mielie meal, rice, brown bread, plain biscuit, eggs, peanut butter, gravy, banana and orange, and over a third (37 – 39%) of BT20+ children consumed legumes, nuts and their by-products.[5] Despite this diversity, their diet was inadequate: high in carbohydrates (including refined sugar) and fat and low in micronutrients.[83]

While the short duration of breastfeeding was associated with a higher risk of stunting at two years of age, the early introduction of an inadequate diet was associated with a deterioration in children's nutritional status between one and two years of age.[82, 83] Indeed, the different forms of undernutrition had almost doubled: by the age of two, 20 – 22% of children were stunted, 8% wasted, 25% underweight and 28% overweight or obese.[83, 84] More than half of the children presented with one or more forms of malnutrition, indicating a double burden of malnutrition in children in the early 1990s.[81]

Childhood (1993 – 2003)

In 1994, the government introduced the National School Nutrition Programme, which provides meals to children in public schools.[85] The BT20+ cohort would have benefitted from that programme but would have been primarily dependent on food procured in the household. Although they consumed more food items during childhood (546 items), the first ten items were similar to those reported during infancy (rice, stiff maize-meal porridge, chicken, sugar, sweets, tea, eggs, full-cream milk, carbonated beverages and oil), and there was little variation in the food items consumed between 5 and 13 years old (Table 2).[86] There was, however, a noticeable decrease in the consumption of fruits and vegetables and a sharp increase in the consumption of polony, fruit juice, ice cream and margarine.[86]

During childhood, nutritional intake has less impact on height than it has on weight and brain development.[87,88] Only 19% of BT20+ children who were stunted at two years recovered a normal height trajectory by five years of age.[11] BT20+ children who recovered from stunting in infancy showed similar cognitive impairment to those children who remained stunted.[90] Furthermore, the highest incidence of obesity was observed in boys and girls aged 4 – 12-years-old (4 – 5%),[84] suggesting that the continuation of a diet high in carbohydrates and fats and low in micronutrients may have laid the foundation for adolescent obesity.

Adolescence (2003 – 2017)

Adolescents have greater autonomy than children, and their eating behaviours are shaped not only by their family, but also by their peers and the food market and marketing environment.

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During adolescence, less than half of the BT20+ children (40%) consumed their main meals outside of their home.[91-93] Only 10 – 20% regularly brought lunch boxes to school (≥2 times/week).[91-93] Some 60 – 70% of adolescents regularly purchased food at the tuckshops (≥10 times/week), and consumed fast food (≥3 times/week), sweetened beverages (≥2 times/week) and confectionary (9 – 10 items/week, ≥7 times/week).[91-93]

Fast-food consumption (McDonalds, Steers, and KFC) increased with age and the first five preferred fast-food items were fried chips, vetkoek (fried dough balls), fried fish (battered), pies (pastry with a filling, usually meat) and boerewors (local sausage) rolls.[93] Sweets, crisps and soft drinks represented 65% of the total confectionery/beverage items consumed, with an increased preference for soft drinks and chocolate and a decreased preference for sweets, ice cream and squash (cordial) with age.[93] Snacking on bread, crisps, fruits, sweet biscuits and chocolate while watching TV also increased with age.[93] Overall, the consumption of fast-food increased during adolescence, and at 17 years of age, fast-food contributed more than half of the recommended daily salt intake and three times the recommended daily intake of added sugar,16 with girls consuming confectionary, sweetened beverages and snacks more often than boys.[93]

In other words, the high carbohydrate – high fat – low micronutrient diet continued through adolescence. Higher consumption of sweetened beverages in boys aged 17 years old was associated with an increase in body fat.[92] However, the prevalence of overweight and obesity was two to three times higher in girls and increased during adolescence (25% – 27%) while the prevalence decreased amongst boys (12% – 8%), reflecting different physical activity patterns during adolescence between boys and girls.[84,95] BT20+ children who had rapid weight gain during childhood were more likely to have earlier pubertal development, a further risk factor for obesity.[96,97] Adolescents' perceptions of their body size (too fat or thin), together with cultural and popular norms, may also influence their eating behaviour and increase their risk of developing eating disorders such as anorexia and bulimia.[98] By the time BT20+ cohort became young adults at 22 – 24 years, 15.5% of young men and 47.5% of young women were overweight or obese.[84]

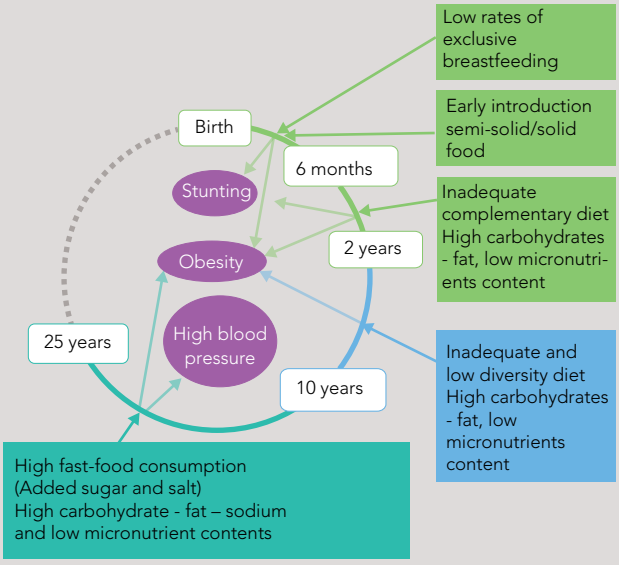
What are the highlights?

Food and dietary habits may have played a significant role in the growth, development and health of the BT20+ cohort.[99-101] Retracing the BT20+ diet from birth to the onset of adulthood:

- reinforces that the impact of food and dietary patterns on growth and development starts early and continues into adolescence,
- demonstrates how the low rates and short duration of exclusive breastfeeding, combined with early introduction of nutritionally inadequate complementary foods, may have contributed to childhood stunting and a rise in obesity,
- highlights how access to unhealthy food procured outside of the home contributes to the current epidemic of adolescent obesity, particularly in young women,
- emphasizes the need for a life-course approach to nutrition and stage-specific targets, including exclusive breastfeeding and adequate complementary feeding in infancy, high diversity and nutritional food quality from childhood, and promotion of a healthy dietary habits in adolescence (Figure 6).

Finally, findings from the BT20+ cohort study highlight the need for integrated programmes that target children, families, households, communities and stakeholders in the food industry to create a nutritionally adequate food environment within which children and adolescents can grow and learn healthy eating behaviours.

Life course nutritional risk factors in the Soweto Birth-to-Twenty Plus Cohort



& Well-Being), SDG 5 (Gender Equality), SDG 6 (Clean Water and Sanitation), SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities & Communities and SDG 12 (Responsible Consumption & Production).[44]

Food and nutrition security are also central to the UNICEF conceptual framework developed in 1990 that outlines the immediate, underlying and basic causes of the undernutrition of children in Figure 5.

The immediate, underlying and basic causes of malnutrition

The UNICEF framework highlights how malnutrition is the manifestation of its immediate causes (inadequate diet and disease), that in turn are driven by underlying causes (inadequate access to food; care; health care services and an unhealthy environment); and ultimately by the basic causes (the broader social, economic and political forces that perpetuate and produce poverty and inequality, neglect human rights and deny people access to essential resources).

The UNICEF framework continues to evolve and adapt to specific areas of concern. For example, Gross and colleagues highlight the role of health care services.[45] These are particularly important for pregnant women, young children and adolescents as health services offer preventative and health promoting services such as antenatal care, immunisation, growth monitoring, nutrition support, and sexual and reproductive health services. In other words, available food is not sufficient to ensure optimal nutrition unless there are functional health systems to prevent and manage disease throughout the life course – with a particular emphasis on the first two years of life when children are most vulnerable to infection.

The malnutrition-infection cycle is a key driver of under-five mortality. In developing countries, and here in South Africa, infectious diseases, such as diarrhoeal diseases and acute respiratory tract infections, are leading causes of child mortality, while 45% of all childhood deaths globally have undernutrition as an underlying condition.[46] This adaptation of the UNICEF framework also makes a clear distinction between environmental health and health care services, recognising how poor health status is also influenced by unhealthy living conditions and the need to engage with other sectors to improve access to housing, water and sanitation.

More recently, Black and colleagues proposed a revised conceptual framework that aims to ensure that children not only survive but thrive and are able to form relationships, learn, take on responsibilities, and ultimately establish a family, provide economic stability and contribute to society.[47] Drawing on the Nurturing Care Framework, they highlight the need for an integrated and multi-sectoral approach that extends beyond good health and adequate nutrition to include responsive caregiving, and opportunities to explore and learn, within a secure and safe environment.

Applying the UNICEF Conceptual Framework highlights how the slow violence of child hunger and malnutrition is embedded in the social, economic and physical environments in which children are conceived, born and raised as illustrated in Table 3.

The social and environmental determinants of malnutrition

Nearly two thirds of South Africa's children (59%) live below the upper-bound poverty line (in households with a per capita income of less than R1,183/month) and one third of children live below the food poverty line (R571/month).[48] This is just enough to meet the nutritional needs of a child but without any allowance for other essentials such as clothing and shelter. For this reason, the *South African Child Gauge* uses the upper-bound poverty line which is the minimum needed to meet a child's basic and nutritional needs.

Given high unemployment, social grants provide an essential safety net for many households. Access to the Child Support Grant (CSG) has increased dramatically since 1998. The grant now reaches over 12 million children and is associated with a decline in child poverty and hunger. Yet the value of the CSG (R450 in October 2020) falls well below the food poverty line and has not been sufficient to reduce the burden of stunting.

South African women carry the primary burden of care for children:[49] Only 34% of children live with both biological parents, 43% with mother only, and 23% of children live with neither parent[48] – most of whom are cared for by relatives (mostly grandmothers) to free women up to seek work elsewhere. This speaks to the ways in which family forms are often stretched and fluid as children move between households and provinces.[50] Yet despite these livelihood strategies, levels of unemployment are particularly high amongst women (with an expanded unemployment rate of 42% in the third quarter of 2019).

COVID-19 and the associated lockdown further intensified these pressures, with women accounting for nearly 60% of the three million jobs lost between February and June 2020.[26] Emerging evidence points to a clear association between poverty, food insecurity, domestic violence and common mental disorders that undermine mothers' capacity to respond and care for their children, and these pressures intensified during lockdown.[51]

Further, a Gini coefficient of 0.65 gives South Africa the unenviable position of the most unequal country in the world among countries in which indicators are available.[8] South Africa is also identified as one of seven countries driving increasing inequality in Africa.[53] These extreme inequalities are important for child nutrition and food security. Growing up in a poor household is likely to compromise children's living conditions and access to services giving rise to multiple forms of deprivation and social exclusion that may culminate in poverty traps that are increasingly difficult to escape. This is shown by the striking inequalities in stunting across socio-economic status. The SADHS found that 12.5% of children under 5 years in the wealthiest group were stunted, compared to 36.3% in the poorest wealth group.[6] The nature of these inequalities goes beyond wealth or income levels and include geographical areas and gender. Income and food security rates differ significantly across and within provinces. Furthermore, the initial narrowing of the gap in the prevalence of stunting reported by May and Timaeus between 1990 and 2008 appears to have slowed.[54] Comparing concentration curves for under-five stunting using the NIDS survey, Jonah and colleagues find that inequalities persist in stunting between 2009 and 2014

Table 3: Social and environmental determinants of child health and nutrition

Living conditions	2008	2018
Children without access to adequate water	37%[a]	30%[b]
Children without access to adequate sanitation	46%[a]	21%[b]
Children without access to electricity	20%[a]	9%[b]
Children living in informal housing	10%[a]	9%[b]
Children living in overcrowded households	26%[a]	18%[b]
Access to health care services		
Children living far from clinic	41%[a]	20%[b]
Early antenatal care (< 20 weeks)	32.5%[c]	68%[d]
Infants fully immunised (≤ 1 year)	89.5%[c]	82%[d]
Vitamin A coverage (1 – 5 years old)	32%[c]	57%[d]
Care arrangements		
Children with mother only	39%[a]	43%[b]
Children living with neither parent	22%[a]	20%[b]
Poverty and unemployment		
Children living in unemployed households	35%[a]	30%[b]
Children living below the upper-bound poverty line (R1,183/month)	71%[a]	59%[b]
Children living below the food poverty line (R547/month)	41%[a]	33%[b]
Education		
Children attending early learning programmes or Grade R (3 – 5 years old)	N/A	69%[e]
Children attending school (7 – 17 years old)	96%[a]	98%[b]
Youth (15 – 24) not in employment, education or training	33%[a]	34%[b]

Notes: For more information on many of these indicators see Part 3: Children Count in this issue of the *South African Child Gauge*.
Sources:
a) Statistics South Africa (2009) *General Household Survey 2008*. Pretoria: Stats SA. Analysis by Katharine Hall, Children's Institute, University of Cape Town.
b) Statistics South Africa (2019) *General Household Survey 2018*. Pretoria: Stats SA. Analysis by Katharine Hall, Children's Institute, University of Cape Town.
c) F Monticelli, *C Day*, P Barron, R Haynes & J Smith (2009) *District Health Barometer 2008/09*. Durban: Health Systems Trust.
d) Massyn N, Barron P, Day C, Ndlovu N & Padarath A (2020) *District Health Barometer 2018/19*. Durban: Health Systems Trust.
e) Statistics South Africa (2018) *General Household Survey 2017*. Pretoria: Stats SA. Analysis by Katharine Hall, Children's Institute, University of Cape Town.

and are more extensive in urban areas as compared to rural areas.[55] This is concerning since in the context of pre-existing high inequality levels, fiscal policy tools commonly applied to health and nutrition programmes may disproportionately benefit the wealthy and burden the poor.

South Africa's children are disproportionately concentrated in deep rural areas and informal settlements, in poor households with high levels of overcrowding and limited access to basic services: 30% of children live in households without access to adequate water, and 21% are without adequate sanitation.[56] This increases the risk of infections such as diarrhoea and pneumonia, which further compromise children's nutritional status.

Access to health care is also compromised, with 20% of children travelling more than 30 minutes to reach their health care facility.[57] Despite these challenges, health care services provide an important platform for treating illness and promoting optimal growth and development – starting early in the antenatal period. The increase in access to early antenatal care provides an important platform for promoting optimal maternal and child health and nutrition, from preventing the mother-to-child transmission of HIV to micronutrient supplements and interventions and support to address violence, obesity, gestational diabetes, smoking and substance use.

Similarly, immunisation coverage provides a proxy for children's access to other primary health care services such as growth monitoring and deworming during the first year of life. Yet immunisation coverage under one year (82%)[58] falls below the World Health Organization (WHO) target of 90% necessary to achieve herd immunity. Access to routine healthcare services has been further disrupted by COVID-19, raising fears about outbreaks of vaccine-preventable diseases such as measles, pneumonia and diarrhoea.

Access to routine health services declines as children get older, with only 57% of children 1 – 5 years old receiving two doses of vitamin A[58]. Therefore, it is vital to consider other platforms – such as early childhood development (ECD) programmes, schools and the ward-based outreach teams – to provide nutritional support beyond the first 1,000 days of life. Access to ECD programmes has increased, yet only two-thirds of young children attend an early learning programme. By contrast, access to formal schooling is nearly universal (98%), yet quality remains a concern. Of 100 learners who started grade 1, only 60 wrote matric in 2008, [37] passed, and 13 qualified to go to university.[60]

Poor quality education combined with high levels of structural unemployment further limits young people's life chances, with 53% of youth aged 21 – 24 not in employment, education or training. This equates to a tremendous loss of potential, which then impacts the health, care and development of the next generation.

While poverty and inequality are key drivers of undernutrition, the rise in overweight, obesity and NCDs stem from a global increase in the consumption of processed foods coupled with increasingly sedentary lifestyles. These foods are high in salt, sugar and unhealthy fats, and low in micronutrients, and are designed to be highly addictive, which helps fuel excessive weight gain.[62] The global food system has become increasingly dominated by a handful of transnational companies that are expanding their markets in the global South with sophisticated marketing campaigns, supermarkets, fast food outlets and informal traders enabling sugar-sweetened beverages and ultra-processed foods to penetrate deep into informal settlements and rural communities, transforming both the local food environment and individual food preferences.[63] These foods are cheap, convenient and easily accessible and particularly appealing in contexts of income-, energy- and time-poverty.

What are children's rights and entitlements?

The Constitution of the Republic of South Africa is the supreme law of our country,[64] and includes a suite of human rights which aim to build a free, equal, dignified and democratic society.[65] This includes a mix of civil, political and socio-economic rights These rights are interdependent, meaning that the civil right to life (section 11), for example, is inextricably bound up with socio-economic rights to have access to sufficient food and water, social security and health care (section 27), amongst others, because all of these are required for the sustaining of life. The state's negative obligation not to interfere with the right to life must be understood as linked to the state's positive obligation to create the environment to allow for a dignified life.

Since socio-economic rights require financial investment by the state, the Constitution provides that the State 'must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation' of each of these rights.[66] The State must put in place plans, policies, laws, programmes, budgets and services to progressively give effect to these rights. To be considered 'reasonable' measures, these must be effective, have sufficient funds allocated to them, be reasonably implemented and be transparent.[67] They must also be balanced and flexible and make provision for short, medium and long-term needs and must be inclusive, especially of those whose needs are the most urgent.[68]

Section 28(1)(c) of the Constitution provides for every child's right to basic nutrition, shelter, basic health care and social services.[69] Significantly, these rights are not subject to progressive realisation. In other words, children or those acting on their behalf can call upon government to make the goods and services attached to these right immediately available. The State cannot rely on resource constraints when fulfilling the rights in section 28(1)(c), as it should have budgeted for its existing obligations.

It is not a coincidence that children's socio-economic rights entitlements are framed differently from those of adults in the Constitution. The drafters of the Constitution clearly saw that due to their vulnerability and lack of maturity, children could not be expected to actively fight for their rights through human rights discourse, and therefore decided to formulate the rights in a manner that would cause the state 'to make a greater effort in order to secure the rights of children'.

The majority of children live with parents, and it is true that the parents have an obligation to care for their children and provide the conditions of living necessary for their development (including adequate nutrition, where it is possible for them to do so).[70] However, article 27 (3) of the Convention on the Rights of the Child (CRC) makes it clear that states shall take 'appropriate measures to assist parents and others responsible for the child to implement this right, and shall, in case of need, provide material assistance and support programmes' with regard to nutrition.

The Court recognised the state's obligation to provide nutrition to children whose parents lack the necessary means in the case of *Equal Education and others v Minister of Basic Education and others* (see case 21).[71] The Court also noted that once a state has taken on such an obligation, it cannot 'back-track'. The CRC Committee's General Comment 19 on budgeting has made it clear that states should not take deliberate regressive measures in relation to socio-economic rights. Drawing on General Comment 19, the Court pointed out that even in times of economic crisis, regressive measures may only be considered after assessing all other options and ensuring that children are the last to be affected, especially those in vulnerable situations.[72]

It is important not to see children's rights in isolation. While section 28 specifically speaks to the rights of children, children are also entitled to the other rights contained in the Constitution, such as the right to basic education (section 29). Second, all rights are interdependent and indivisible.[73] For example, a child cannot enjoy the right to dignity without the right to equality. In *Equal Education and others v Minister of Basic Education and others*, the Court recognized the interdependence between a child's access to food and a child's ability to enjoy their right to education and health.[71] It is therefore important that the state considers this interdependence and interrelatedness, and ensures that it does not limit its policy and programmatic responses to certain sectors or departments, emphasizing the need for intersectoral collaboration and coordination.

What are the key opportunities for intervention to improve child nutrition?

Food and nutrition outcomes are complex, even at an individual level within individual households, where both undernutrition and overnutrition coexist as is the case in the majority of households in South Africa. Opportunities to intervene and to maximize impact are imperative if we are to stem the tide of all forms of malnutrition and its devastating impact on children's lives. In our shrinking economy, we need to make use of every point of contact to strengthen support for mothers, adolescents and children.

Table 4 outlines possible nutrition-specific interventions and opportunities to mitigate the slow violence of child hunger in South Africa. These must be sensitive to children's changing nutritional needs from the first 1,000 days onwards. They also need to identify delivery platforms appropriate to different points in the life course.

Table 5 extends this analysis and highlights the need for both nutrition-specific and nutrition-sensitive interventions to address the broader drivers of the double burden of malnutrition – including social protection, health care services, and adequate water, housing and sanitation. Supporting the optimal health and nutrition of children and families requires an intersectoral, whole of society approach that harnesses the efforts of Health, Education, Social Development, Labour, and Trade and Industry to create a more equitable and enabling environment for South Africa's children. Interventions listed in *italics* are recommended but not yet in place, while concerns remain about the coverage and quality of other programmes.

Food and nutrition interventions are widely recognised and evidenced to require a multi-sectoral response. Several African countries that have successfully improved child malnutrition have included high-level accountability and co-ordination structures to oversee food security and nutrition policy and programme implementation.[74] Coordination needs to be linked to accountability mechanisms and must extend beyond setting up structures and should ideally build a common understanding amongst stakeholders, strengthen advocacy efforts and implementation, and emphasise a people-centred rather than a top-down approach.[75]

South Africa's Integrated Food and Nutrition Security Strategic Policy has since 2014 proposed the establishment of a National Food and Nutrition Advisory Committee to be chaired by the Deputy President. Had such an Advisory Committee been in place when the COVID-19 pandemic struck, the South African government's food and nutrition response might have been more proactive. Instead, community-based organisations stepped in to provide immediate food relief under severe resource constraints, and civil society eventually resorted to litigation to get government to respond to the rise in hunger and the anticipated long-lasting and deep impact on maternal and child nutrition.

Table 4: Nutrition-specific interventions to mitigate the slow violence of child hunger in South Africa

		Evidence-based interventions	Delivery platforms	Existing programmes
First 1,000 days	Pregnancy	• Preconception care • Optimal weight management • Identification of malnutrition and prevention of low birth weight • Micronutrient supplements • Iodised salt • Deworming • Prevention and treatment of HIV/TB and malaria • Health education on safe sex and prevention of substance use • Regulations relating to foodstuff for infants and young children (no direct marketing to mothers)	• Basic antenatal care at primary health care clinics and hospitals • Community-based and mobile health services	• Prevention of mother-to-child transmission • Mother Baby Friendly Initiative • Basic antenatal care • Infant and young child feeding
	Birth	• Immediate and exclusive breastfeeding • Delayed cord clamping • Counselling on safe sex during the breastfeeding period • Regulations relating to foodstuff for infants and young children (no direct marketing to mothers and other caregivers) • Promotion of hand washing and hygiene • Access to the child support grant (CSG) and other social protection measures • Immunization	• Maternity units • Hospitals • Community	• Mother Baby Friendly Initiative • Primary health care service • Ensure birth registration to enable access to social protection
	0 – 6 months	• Exclusive breastfeeding • Management of infectious diseases e.g. diarrhoea • Growth monitoring and promotion • Treatment of moderate and severe acute malnutrition • Counselling on safe sex during the breastfeeding period • Promotion of hand washing and hygiene • Access to the CSG • immunization	• Primary health care clinics and hospitals	• Mother Baby Friendly Initiative • Primary health care services, including road to health book
	6 – 24 months	• Continued breastfeedinand complementary feeding • Micronutrient supplements (Vitamin A, iron and zinc) • Food fortification and iodised salt • Management of diarrhoea (including zinc) • Deworming • Growth monitoring and promotion • Prevention and treatment of moderate malnutrition • Treatment of severe acute malnutrition • Targeted supplementary feeding • Regulations relating to foodstuff for infants and young children (no direct marketing to mothers) • Promotion of hand washing and hygiene • Access to the CSG • Immunization	• Primary health care clinics and hospitals Community • Early childhood development facilities	• Child health primary health care service package • Community-based services
Continued investment in nutrition	2 – 5 years	• Growth monitoring and promotion • Treatment of severe acute malnutrition • Food fortification and iodised salt • Micronutrient supplementation (Vitamin A, iron and zinc) • Deworming • Nutrition education on healthy diets • Regulations relating to foodstuff for infants and young children (no direct marketing to mothers) • Promotion of hand washing and hygiene • Access to the child support grant	• Primary health care clinics and hospitals Community • Early childhood development facilities Communities	• Primary health care services

Continued investment in nutrition	5 – 9 years	• Health screening • School feeding • Deworming • Food-Based Dietary Guidelines • Nutrition education in the curriculum • Food garden initiatives • Promotion of hand washing and hygiene • Access to the child support grant	• Primary health care facilities • Hospitals • Schools • Community	• Primary health care child health services • School health services • National School Nutrition Programme
	10 – 18 years	• Health screening • School feeding • Deworming • Food-Based Dietary Guidelines • Nutrition education in curriculum • Food garden initiatives (at school and in communities) • Promotion of hand washing and hygiene • Access to the child support grant	• Schools • Primary health care facilities • Hospitals • Community	• National School Nutrition Programme • Adolescent and youth friendly clinics • School health services

Adapted from: Hendricks M, Goeiman H & Hawkridge A (2013) Promoting healthy growth: Strengthening nutritional support for mothers, infants and children. In: Berry L, Biersteker L, Dawes A, Lake L & Smith C (eds) South African Child Gauge 2013. Cape Town: Children's Institute, UCT.

What are the key policy recommendations?

South Africa can learn from the experience of other countries in which there has been greater success with the reduction of child food and nutrition insecurity. Double-duty actions are one recent innovation that has the potential to simultaneously reduce the risk of undernutrition, micronutrient deficiency and overweight, obesity or diet-related NCDs. In this context, "Cash Plus" programmes can serve as a far-reaching double-duty action. These are social protection policies that combine cash transfers such as social grants with links to other services (as in Case 22 on the proposed maternity grant). These can include social and behaviour change communication around good nutrition, feeding and hygiene practices (such as Case 23 on the CoCare vouchers), and fiscal policies that provide incentives for healthier diets and increase the costs of diets that are unhealthy. As another example, micronutrient supplements to boost preconception health could easily be integrated into the National School Nutrition Programme. It is also possible to include greater investments in antenatal and postnatal health care, and in the nutrition of adolescent girls and pregnant and breastfeeding women as a component of a Cash Plus programme.

More broadly, a holistic approach that sets targets to reduce child malnutrition is necessary. Brazil's "Zero Hunger Programme" is an example of how this can be achieved. During the past 20 years, Brazil reduced child stunting from about 25% in 1985 to just 7% by 2007. Monteiro and colleagues identified four factors that contributed towards this:[76]

- Better educated mothers, due to rising access and quality of education services;
- Rising incomes of poor families, due to economic growth, rising minimum wages, the Family Agriculture Programme and cash transfers such as *Bolsa Familia* linked to social services;
- Improving maternal and child health care, due to free health services and the Family Health Strategy; and
- Wider coverage of water supply and sanitation services as measured by the numbers of households served by the public water supply and the public sewage system.

Such a policy should include multi-sectoral coordination and accountability mechanisms to achieve the necessary improvements in incomes, diets, education, quality health care, clean water, sanitation and hygiene in order to protect children and enable a successful transition to adulthood. The long-awaited National Nutrition and Food Security Council would go a long way towards establishing such coordination at a national level, but coordination will also be necessary in all spheres of government. Particular attention should be paid to provincial and local government who are responsible for many of the indirect drivers of food and nutrition insecurity, including water, sanitation, electricity, health care and zoning.

Lessons from the COVID-19 pandemic also highlight the need to improve coordination at a local level as was achieved by the Community Action Networks (CANS), the Western Cape Food Relief Forum, and the mobilization of small farmers and growers across the country. Empowerment is also needed at the household level to enable caregivers to act to prevent disease and ensure optimal nutrition within their resource constraints. This includes recognising the power of children and adolescents as consumers in their own right, and enabling children and families to make informed and healthy choices free from commercial pressures as recommended by the WHO-LANCET-UNICEF Commission on the Future of the World's Children[77] and the UN Committee on the Rights of the Child's General Comment on the State's responsibility to protect children from harmful and exploitative business practices[78].

Table 5: An intersectoral approach to promote optimal nutrition across the life course

<table>
<tr><th></th><th>Pregnancy</th><th>Infancy</th><th>Preschool</th><th>School</th><th>Adolescence</th></tr>
<tr><td rowspan="3">Nutrition</td><td>Micronutrient supplements</td><td colspan="2">Exclusive breastfeeding (0 – 6 months) and optimal feeding support</td><td colspan="2">National School Nutrition Programme</td></tr>
<tr><td>Prevention of low birth weight</td><td colspan="2">Growth monitoring and treatment of severe malnutrition</td><td colspan="2">Nutrition education and food gardens</td></tr>
<tr><td colspan="5">Food-based dietary guidelines, food fortification, food labelling, marketing restrictions, taxes and subsidies</td></tr>
<tr><td rowspan="3">Health</td><td rowspan="2">Early antenatal care
Mental health screening and support
Family planning</td><td colspan="2">Postnatal care
Integrated management of childhood illnesses</td><td colspan="2">School health services
(health promotion, screening and referrals)</td></tr>
<tr><td colspan="3">Immunisation</td><td>Youth friendly clinics and related services
Contraception</td></tr>
<tr><td colspan="5">Free primary health care, Universal health coverage</td></tr>
<tr><td rowspan="2">Caregiver support</td><td rowspan="2">Maternity and family responsibility leave
Antenatal classes</td><td colspan="4">Child-care services for working or work-seeking caregivers</td></tr>
<tr><td colspan="4">Parenting education and support programmes</td></tr>
<tr><td rowspan="2">Social services</td><td>Maternal grants</td><td colspan="4">Early birth registration and access to social assistance</td></tr>
<tr><td>Social services to prevent and address risk factors</td><td colspan="4">Prevention and early intervention programmes
Child protection services and psychosocial support</td></tr>
<tr><td rowspan="2">Education</td><td rowspan="2"></td><td>Early stimulation (caregivers who touch, talk, listen and respond to children)</td><td>Access to quality ECD programmes</td><td colspan="2">Access to quality education
Care and support services to address barriers to learning</td></tr>
<tr><td colspan="4">Safe, stable, nurturing environment and responsive care
Access to toys, books, sports and recreational facilities</td></tr>
<tr><td>Environment</td><td></td><td colspan="4">Adequate, electricity, water and sanitation
Safe and affordable energy and transport</td></tr>
</table>

Adapted from: Berry L, Biersteker L, Dawes A, Lake L & Smith C (2013) Stepping up national development: Prioritising services for young children. *South African Child Gauge 2013*. [poster] Cape Town: Children's Institute, UCT.

The COVID-19 pandemic and economic recession threaten to intensify the slow violence of child malnutrition, deepen inequities and undermine national development. It is therefore vital that we put children at the heart of our COVID-19 relief efforts and recovery plans and intervene early and decisively to disrupt the intergenerational transmission of malnutrition. This will require strong leadership, evidence-based strategies and a whole of society approach to address the double burden of malnutrition and ensure no child is left behind.

Box 2: The slow violence of hunger

Gareth Haysom[I]

The findings presented in this issue of the *Child Gauge* make it clear that child malnutrition is, without doubt, a form of slow violence: "A violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all … with its calamitous repercussions playing out across a range of temporal scales".[3]

Yet old ways of thinking limit our vision, political will and capacity to take action, and unless we radically reimagine our current policy and conceptual approaches, we will continue to enact slow violence on the children of South Africa.

Firstly, we need to challenge the ways in which we have come to accept and normalise food poverty in all its forms. This normalisation has its roots in the colonial and apartheid policies of exclusion and underdevelopment that have created a food system and food environment that work against many South Africans, despite caregivers' daily struggles to give their children the best possible future.

This is not to suggest that the poor are ignorant of a good diet or lack the initiative to aspire towards a better diet. This is certainly not the case and caregivers make deeply strategic choices and trade-offs on a day-to-day basis. Yet this daily struggle doesn't translate into wider political activism.[79] Society is passive, and the state has become "blind" to issues such as child malnutrition, despite its long-term impact on children and the economy.

Secondly, researchers concerned with food and nutrition security need to expand their view of food environments to encompass the storage of food, transport, energy and water sources. This extends beyond the household to the retail environment where vendors' decisions on what to stock are informed by factors beyond consumer demand, for example, vendors without refrigeration are more likely to stock shelf-stable processed foods than fresh foods.

Deeper thought is also needed to ensure that some of the double-duty actions proposed in the *Child Gauge* do not have unintended consequences. For example, some forms of cash transfers may be associated with increased energy costs and lead to food choices (such as preference for instant porridge) that may undermine the intended nutritional benefits. This is not to argue against these but to call for far more systemic consideration of the broader food environment.

Finally, a more reflective approach is required, not just in terms of food and nutrition policy but also in terms of wider governance, planning and development interventions. Current health/child/urban/food system policies and interventions tend to locate the responsibility for better outcomes on the individual, often through awareness campaigns and more active lifestyles, indirectly blaming mothers and caregivers for the current nutrition outcomes instead of addressing the role of the broader food system and the ways in which it shapes local food environments and individual choices.

Addressing this slow violence requires directing important questions at the 'sacred cows' of food security. For example, which scale of governance can have the greatest impact on nutrition outcomes given this slow violence and historical trajectory? Are policies at a national level, often focused on increasing production, actually going to address the needs of children? What other spheres of government (and governance) have a role? What is the role of spatial planning, urban management and economic development in child food security? What is the role of nutrition-sensitive planning? And finally, what mix of delivery platforms would prove most effective to translate this vision into action?

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Child-centred food systems: Ensuring healthy diets for children

Rina Swart,[i] Maria van der Merwe[ii], Mark Spires[iii] & Scott Drimie[iv]

It is widely acknowledged that investing in children's nutrition early in life can enhance their survival, health, cognitive function and development potential. Yet there is a growing awareness of how different food systems are driving a double burden of malnutrition[1] and damaging both children's health and the environment.[2] The high levels of undernutrition in children and the rapidly growing burden of overweight and obesity, if left unchecked, will continue to adversely affect national development. It is therefore essential to locate children within the broader food system, in order to mobilise a collective and coordinated effort to create a food system that supports healthy, affordable and sustainable diets for children and adolescents.

This chapter addresses the following questions:

- What does a healthy diet for children look like?
- Why is it important to adopt a food systems approach?
- What other systems affect children's nutritional status?
- What do we know about the food system in South Africa?
- What are the opportunities to improve the quality of food for children?

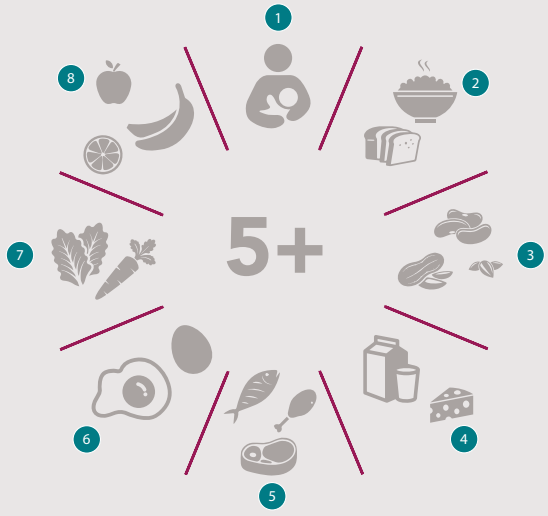
What does a healthy diet for children look like?

The right to basic nutrition for children in South Africa is enshrined in section 28 of the Constitution.[3] Children who eat enough of the right foods in the right way, at the right time of their development, in healthy environments, are more likely to survive, grow, develop and learn. They are better equipped to thrive, even when faced with disease, disaster or crises.[4] Children in the first six months of life get their perfect nutritional requirements from breast milk. Thereafter, complementary foods appropriate for their developmental stage should be added until the child can share family food. A healthy diet for children should be diverse (see Box 3), including at least five of the eight food groups daily. Preference should be given to nutrient-dense foods and caregivers should try to avoid providing foods with low nutritional value such as sugar-sweetened beverages, candy, chips and other foods high in sugar, salt and trans fats.[5] Adding sugar to home-cooked foods should be avoided as it may set lifelong taste preferences.[4] These guidelines are reflected in South Africa's age-specific Paediatric Food-Based Dietary Guidelines (PFBDGs), which were published in 2013[6] but never officially adopted by the Department of Health.[7]

Box 3: A healthy diet for infants and children

A healthy diet should include a diverse mix of foods from different food groups each day:

1. Breastmilk
2. Grains, roots and tubers
3. Legumes, nuts and seeds
4. Dairy (milk, yoghurt, cheese)
5. Modest amounts of flesh foods (meats, fish, poultry, and liver or organ meats)
6. Eggs
7. Vitamin A-rich fruits and vegetables (carrots, mangoes, dark green leafy vegetables, pumpkins, orange sweet potato)
8. Other types of fruits and vegetables[4]



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While the guidelines for healthy eating are clear, children's health, nutrition and food choices are shaped and constrained in powerful ways by the broader food system

Why is it important to adopt a food systems approach?

In 2018, UNICEF and the Global Alliance for Improved Nutrition hosted a global consultation to identify what is needed to create a child- and adolescent-centred food system. They recognised that actors in the food system rarely consider the needs of children and adolescents and that children's food choices are increasingly shaped by food environments that are flooded by cheap, unhealthy food. More nutritious foods are often not available, accessible or affordable. Therefore they chose to adopt a food systems approach in order to harness collective action across the food system to support healthy, affordable and sustainable diets for children and adolescents.

The food system comprises "all the elements and activities that relate to the production, processing, distribution, preparation and consumption of food, and the outputs of these activities, including socio-economic and environmental outcomes".[8] This includes complex interactions between the environment, people, inputs, processes, infrastructure and institutions across the food system, including how food supply chains and local food environments have a powerful influence on consumer behaviour as illustrated in Figure 6.

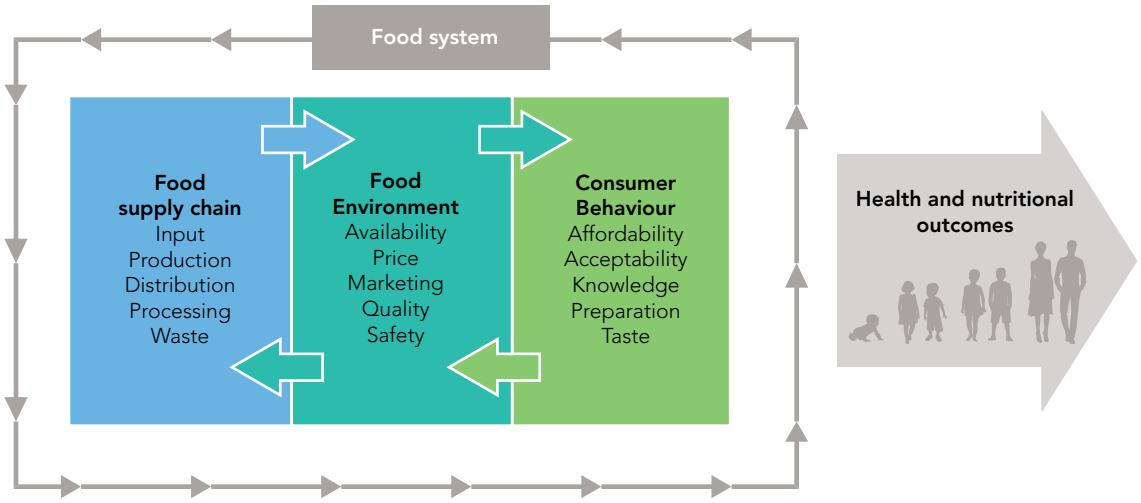
1. **Food supply chains** include all the activities involved in taking food from producers to consumers - from food production, storage, distribution, processing, packaging, retail and markets through to the disposal or recycling of waste and packaging.
2. **Food environments**[9] are market-driven, and the availability of both healthy and unhealthy foods is influenced by food suppliers (such as shops, markets, fast-food outlets and traders), food prices, marketing and regulations.
3. **Consumer behaviour** describes how people acquire, prepare and consume food. These behaviours are constrained by consumers' purchasing power and food preferences, including which foods they find affordable, accessible, convenient and desirable.

Children's dietary practices are also shaped by their care context as parents, caregivers, schools and early childhood development (ECD) programmes often act as gatekeepers, taking responsibility for procuring and preparing food and supervising the eating practices of younger children, while older children and adolescents are more independent.

Ideally, food systems should underpin all six dimensions of food security, as outlined in Chapter 1. In other words, nutritious food should be available, physically and economically accessible to all, safely and appropriately utilised, and stable and resilient in times of stress and shock. In addition, food systems should be empowering and enable the most marginalised to participate in decision-making and they should be environmentally, socially and economically sustainable.

In 2018, The Economics of Ecosystems and Biodiversity (TEEB) elaborated on the food system framework focusing on the processes and invisible positive and negative flows of resources within the food system,[1] rather than the individual consumer. They highlighted the complexity and interconnectedness of food systems and how actions and changes have repercussions across the system.[10] For example,

Figure 6: Key drivers of the food system



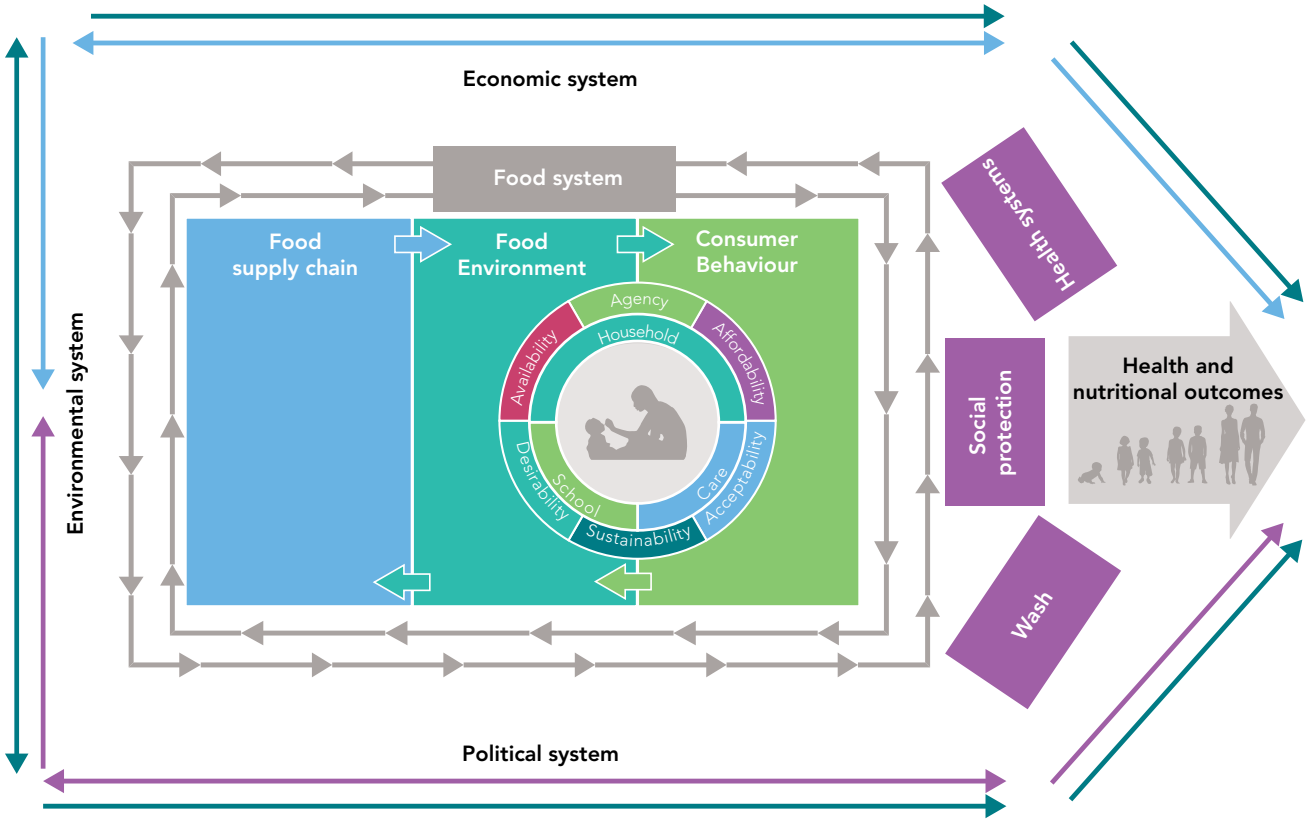
Adapted from: Turner C, Aggarwal A, Walls H, Herforth A, Drewnowski A, Coates J, et al. Concepts and critical perspectives for food environment research: A global framework with implications for action in low-and middle-income countries. *Global Food Security*. 2018;18:93-101.

food producers' decisions and consumers' food choices are directly shaped by the broader social, political and economic forces impacting food systems. Similarly, producer and consumer decisions and choices can influence the food system through the principles of supply and demand.

Multiple food systems can co-exist.[11] For example, breastfeeding is a short supply chain where the mother (food supply) and the infant (consumer) are directly linked.[12] It can take place within a household that prepares and sells "vetkoek" and fizzy drinks at the local school, where they are simultaneously creating their own livelihood and contributing to the food environment for school children.[13]

Figure 7 illustrates the complex multi-dimensional feedback system that shapes the health and nutrition outcomes of children. The food available to children, children's care contexts and the six dimensions of food security have been integrated and then positioned at the intersection of food environments and consumer behaviour to highlight how they shape and are shaped by these two sub-systems. Unfortunately, the forces that shape (and continuously reshape) the food system have increased the distance between consumers and the source of their food. This increased distance does not necessarily imply a longer physical distance, but rather indicates an increase in the number of actors in the food chain.[14] It also does not imply that food has become less accessible. Instead, there has been an increase both in volume and in the number of choices available. Yet, this longer distance has led to more processed food and food that is less healthy for both humans and the environment. Economies of scale also mean that these ultra-processed foods are often cheaper than healthy foods, so that children in poor households have no choice other than to consume cheap, unhealthy diets. In other words, the desirability of food is shaped by structural determinants within and beyond the food system. As Friel puts it, "what, when, where and how much people eat does not happen by accident".[15] The corporatization of the global food system has created the conditions that are cultivating the excess consumption of cheap, unhealthy food and beverages, manufacturing the epidemic of non-communicable diseases (NCDs) and harming the environment.[2, 15, 16]

Figure 7: Diagrammatic illustration of systems and forces affecting the diet quality and quantity of children



Adapted from concepts in: Turner C, Aggarwal A, Walls H, Herforth A, Drewnowski A, Coates J, . . . Kadiyala S. Concepts and critical perspectives for food environment research: A global framework with implications for action in low-and middle-income countries. Global Food Security. 2018;18:93-101; UNICEF. UNICEF Nutrition Guidance: Improving children's diets during the complementary feeding period. New York: UNICEF. 2020; HLPE. Nutrition and food systems. HLPE Report #12. Rome: A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. 2017; HLPE. Food security and nutrition: Building a global narrative towards 2030. HLPE Report #15. Rome: A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security. 2020.

Case 2: How primary caregivers of children on the Child Support Grant access food in Mount Frere, Eastern Cape

A study conducted between 2014 and 2015[62] in rural Mount Frere with primary caregivers of children in receipt of the Child Support Grant, demonstrates a markedly different food system landscape compared to urban areas. In this part of the world infrastructural constraints influence the decisions and choices caregivers make about what food to buy and where to buy it. Study findings showed that in 2015 accessing food in Mt Frere came with high transport costs –the average caregiver lived about 15kms from town and paid at least R10 each way for herself and then R4 for each big grocery item (e.g 10kg mealie-meal, sugar). This led to some caregivers opting to buy bulk items in nearby village shops even though the prices were higher, and only buying smaller food items such as soups, canned food, meat/meat products in town.

Another infrastructural issue that plagued many caregivers in the rural town was a lack of electricity in many of the town's villages. In this rural setting, caregivers' ability to access and provide diverse diets for their children was impeded by issues that went beyond food prices, such as food storage concerns. Caregivers did not only have to contend with the cost of a fridge (which many cited as too high) but had to deal with the lack of electricity even when they had a fridge.

> *"I do have a fridge, but I do not have electricity so I cannot use my fridge, so I would need to take the food that needs a fridge to a friend who has electricity….."* (CSG Recipient, Mt Frere)

For caregivers who lived closer to town, the choice of where to buy groceries was influenced mainly by price and perceived freshness of the food items, and so caregivers go to different shops for different grocery items

> *"I buy mealie meal, flour, rice, potatoes, butternut, cooking oil, samp, onion, carrots. I buy a few things….[at Boxer stores]…I buy at Shoprite as well [because] the veg at Shoprite looks fresh almost every time I buy it and they sometimes have certain items on sale."* (CSG recipient, Mt Frere)

Many households ran out of food before the end of the month, barely making it to the next grant payment.

> *"It is always on the last week where you totally run out and you realise that wow, things are bad. That last week is the worst maybe you have mealie-meal but you do not have sugar."* (CSG recipient, Mt Frere)

During these periods, women demonstrated resourcefulness when they ran out of food; they leveraged the grant in reciprocal exchanges that kept them from destitution.

> *"We ask around in the village, maybe someone you know, like a neighbour. You say, "Can you please give me some maize meal", you know that you are going to mix that with whatever you have in the house, maybe next time she will also need the same from you…we swap items – maybe you have mealie-meal or potatoes and maybe that is just what she needs. We try and make it to the day we get paid."* (CSG recipient, Mt Frere)

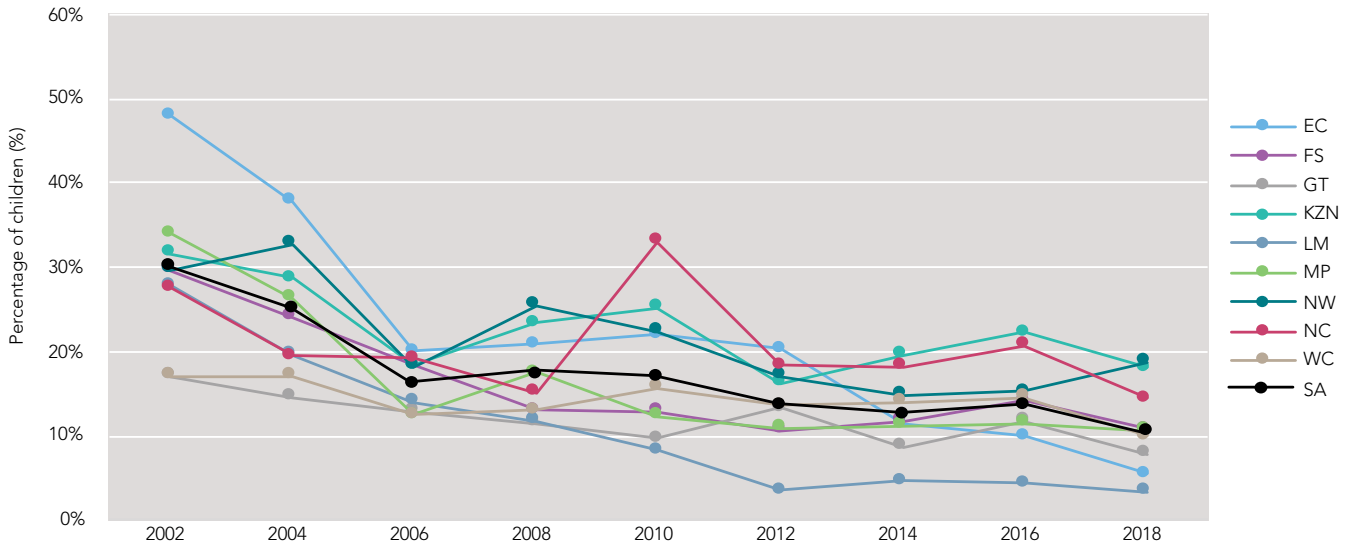
What other systems affect children's diets and nutritional status?

The food system does not exist in isolation. Other critical systems that affect children's nutritional status are the health, WASH (water, sanitation and hygiene) and social protection systems.[4] Some of these systems (see Figure 2) are discussed in more detail in later chapters. Therefore, this chapter only provides a brief overview of the interaction between these systems and the food system.

The healthcare system plays a central role in modifying the impact of the food system on child health. Infections such as diarrhoea impair children's ability to utilise nutrients, increasing their risk of malnutrition, while malnutrition impairs children's immunity and increases their risk of infection. At the same time, the increase in overweight and obesity is fuelling an epidemic of NCDs that is placing increased strain on the healthcare system, with malnutrition and diet-related diseases the world's largest drivers of morbidity and mortality.[10] Healthcare services provide essential preventive, promotive, curative and rehabilitative care, from preconception to adolescence and play a vital role in preventing and treating malnutrition. Yet service gaps, overcrowded and inadequately resourced health facilities and conflicts, disasters or pandemics that deflect children and caregivers away from health-care services may impact negatively on children's nutritional status.

Poor water, sanitation and hygiene (WASH) may contribute towards persistently poor child health and malnutrition

Figure 8: Child hunger by province, 2002 – 2018



Source: Statistics South Africa (2019) General Household Survey 2018. Pretoria: Stats SA. Analysis by Winnie Sambu.

such as stunting (see Case 5). This interaction is often mediated through the oral-faecal cycle, where pathogens are transmitted via fluids, fields/floors, flies and fingers to foods,[17] and then to the child, causing infection leading to growth faltering. In addition, challenges in accessing adequate refrigeration and storage mould people's dietary choices and food preparation practices, often leading to a preference for processed or fast foods to save time and energy (see Case 2).[18, 19]

Social protection programmes such as social grants, health insurance, unemployment benefits and public works programmes[20] can reduce food insecurity by providing access to cash and/or food relief.[21] However, their impact on nutrition is dependent on: i) the households' access to well-functioning local food markets, ii) the relative value of the benefit (cash or food), and iii) the duration and reliability of the benefit.[21]

What do we know about the food system in South Africa?

The South African food system is characterised by cultural and socio-economic diversity, high levels of income inequality, a young (but ageing) population and continued urbanisation. The food landscape confronting children and their caregivers consists of a highly commercialised food system, with the majority of households purchasing all their food. Subsistence production is limited and shrinking. Based on the General Household Survey from 2017, only 15% of households are involved in agricultural activities.[22] More than half of these households are female-headed households in rural areas and 78% of them engage in agricultural activities as an extra source of food. However, only 2% of those engaged in household agricultural activities manage to generate an income from their activities. The two provinces where agricultural activities are highest (Limpopo and Eastern Cape) reported the lowest levels of child hunger (see Figure 8).

On a national level, South Africa has a relatively well-endowed agriculture sector, albeit based on limited arable land and significant water constraints. It is often argued by the mainstream agricultural sector and many agriculture economists that the country is food secure, as it is generally a net exporter of agricultural and food products, with agricultural production levels having grown steadily to meet the growing demand for human consumption, animal feed and alternative industries such as biofuel.[23, 24] Yet gross inequalities and poverty renders almost two-thirds of children in South Africa at risk of food insecurity and hunger.[22]

The COVID-19 pandemic has foregrounded the failures of the food system to provide sufficient, healthy, nutritious food and to serve the most vulnerable people in South Africa, including children of all ages. Progress achieved since 2002 in the reduction of hunger (See Figure 8) may well be reversed, with indications from the NIDS-CRAM data of adverse effects on employment, food security and widening inequality: 40% of the NIDS-CRAM sample reported a loss of employment as a result of COVID-19 and 22% of adults and 15% of children were reported to have gone to bed hungry during the period March to June 2020.[25, 26]

The growth in conventional agriculture since the 1960s (currently estimated at 2%)[23] has also come at a high environmental cost, with the unsustainable expansion of cultivation into fragile ecological systems.[1, 27] Current food systems over-produce products of low nutritional value and food products that are harmful to health such as sugary drinks, while significantly under-producing beneficial foods such as seeds and nuts, fruits and vegetables.[1] The chain of food production, processing and marketing is increasingly concentrated in a small number of transnational corporations, primarily driven by profit, with ultra-processed food becoming increasingly available and affordable. This imbalance, together with the demand for exports in pursuit of financial gain, often results in fresh fruit being unaffordable and unavailable to the children of the producing country. The 14% inflation in fruit prices in South Africa during 2019/20 is a case in point.[28, 29]Furthermore, the consumption of fresh vegetables in South Africa has declined whilst consumption of ultra-processed foods increased dramatically between 1994 and 2012,[30] with far-reaching public health consequences for children and adults alike.

The rapid spread of formal supermarkets and fast-food chains influences consumer behaviour and food consumption patterns. This expansion, while offering consumers a wider range of products, also entails major organisational changes in the whole food supply chain. The procurement processes of supermarkets and large processors set the rules of the game for farmers and first-stage processors in terms of volumes, quality and pricing. Corporations have immense power in structuring consumer perceptions of food quality and health, from input into apparently neutral dietary-based guidelines to advertising, while the poorest marginalised consumers are excluded from this process.[31] Formal retail expansion had been accompanied by growth of the informal food retail economy, which has helped extend the reach of ultra-processed foods into informal settlements and former homelands, which trap many of South Africa's poor.

These power dynamics permeate the food system at different levels and scales. An example is that of women's[32] role in nutrition, illustrated by the fact that women's income is more likely to be channelled towards food procurement than that of men. Women tend to spend social grants on food, whereas men tend to spend their income on non-household-related purchases.[33] Gender roles in caring for children are important in this regard. Indeed, women's role in improving nutrition outcomes, coupled with the unequal power

Case 3: Sugar cane production in South Africa

In 2018, South Africans consumed almost 40kg of sugar per person, equivalent to more than 100g of sugar per day. Sugar cane production has grown exponentially over the past 20 years, yet the sector has been undermined by exports from an even bigger and faster growing industry in Brazil, which started flooding the local market about seven years ago, aided by World Trade Organization agreements. Ironically, the effect of Brazilian sugar on the South African industry was no different to how South African exports dominated and undercut sugar cane production in six other southern African countries. The cumulative effect of changes in European markets, adverse climate conditions and increasing local labour costs contributed to the subsequent financial challenges facing the South African sugar industry.[42] This then fuelled their aggressive opposition[43] to the implementation of the South African health promotion levy (HPL) or 'sugar tax'. The HPL translated into about a 10% increase in the retail price of sugar-sweetened beverages in South Africa, as of 1 April 2018. Although the claim that the tax would lead to job losses in the beverage industry proved to be unfounded in Philadelphia, USA,[44] the per capita volume of taxed beverages purchased in South Africa declined, whilst per capita volumes of untaxed beverages purchased remained constant, with the reduction being greater in low socio-economic households.[45] A community-based study in a low socio-economic neighbourhood demonstrated that the reduction in energy (kJ) and sugar consumption from sugary beverages was a result of both behaviour change and the responsive reformulation by industry.[43] Although select primary brands retained a high sugar content, many other brands now contain < 4g sugar/100ml (the cut-point for taxation). This is good news as it reduces the sugar and energy intake from sweetened beverages, but it raises new concerns, especially for children, as the safety of non-sugar sweeteners for children has always been questioned.[46] In South Africa, Regulation R733 requires the clear labelling of all packaged food products containing non-nutritive sweeteners.[47] The replacement of sugar with one or more non-sugar sweeteners (ongoing own research) has anecdotally also resulted in an even more intense sweetness, which may drive a growing desire for sweet food choices.[48, 49]

dynamics involved in decision-making regarding how food is used and for whose benefit, once it is accessed, calls for a gendered lens to inform both policy and programming.[34]

In summary, the availability and affordability of highly processed foods are considered important drivers of poor nutrition.[35-38] Household income and food expenditure, including intra-household expenditure, do not correlate with a healthy diet. For the most vulnerable groups, nutrient-rich foods such as animal-source foods, fruits and vegetables are not affordable, with both price levels and volatility affecting household purchasing power, welfare, food security and nutrition.[39]

At another scale, international forces also shape the South African food system. Supply chain policies that focus on economic growth rarely consider the need to increase access to affordable healthy food. A broad example is that of the Department of Trade and Industry aiming to create a favourable environment to attract investment from multinational companies. Yet, economic policies focused on liberalization, particularly for corporate and multinational food processors, have negatively affected nutrition and food security and simultaneously increased the availability of highly processed foods, contributing to diet-related NCDs.[40]

Multilateral institutions such as the World Trade Organisation (WTO) also shape food systems within countries. Often, smaller developing countries with more vulnerable economies are disadvantaged. Sugar production in South Africa is a case in point.[41] A brief summary is presented in Case 3.

What are the opportunities for improving the quality of food for children?

There are a number of challenges that need to be addressed in the South African food system:

- Food value chains are dominated by strong economic and political interests, where food is regarded as a commodity with the primary purpose of delivering profits rather than meeting the nutritional needs of children.[37, 50]
- The emphasis on innovation and the almost unlimited possibility for technological development in food science in the race to achieve zero hunger, has resulted in a food supply that is far removed from its natural origins. This has become a major driver in the growing obesity epidemic, whilst the tide of hunger and undernutrition, especially in children, continues unabated.
- Nutrition is used as a persuasive marketing tool, where single foods and single nutrients are used out of context[51] to promote brand-specific sales.[15]
- Discursive narratives frame healthy eating as a behaviour choice, placing the primary responsibility for poor diets on individuals, rather than recognising the responsibility of all stakeholders in the food chain for delivering sufficient nutritious food, produced with sensitivity to the environment, for all human beings.
- The nutrition of children is shaped by a complex system and requires a whole of government and a whole of society approach, yet a lack of political will and policy coherence continues to undermine progress.

There is global consensus that transformation of food systems is critical and long overdue. The cost of inaction – and allowing undesirable action to continue unchecked[50] – cannot be ignored. Such transformation should include re-evaluating the type of commodities, the quality of food and the mechanisms through which it should be made accessible and affordable for children to consume healthy, nutritious food every day. In addition, food should be provided in a sustainable way to ensure that the planet can continue to produce adequate quality food while respecting the diversity, livelihoods, and well-being of communities and the fragile lands that nurture much of what we eat.[52] The fostering and empowerment of the most vulnerable, yet structurally-weakened, stakeholders in the food system is critical. To achieve this, food systems should become child-centred, pro-poor and sustainable. See Table 6, for a diagrammatic illustration of the opportunities and threats to healthy diets for children in the food system.

Towards a child-centred food system

A child-centred food system is one that not only reduces malnutrition but also makes healthy diets available, affordable, appealing and aspirational for children (0 – 17 years).[53] Hawkes and colleagues[53] advise that such an approach should start with the lived realities of children and their caregivers and then use a child-centred assessment to identify necessary actions throughout the food system. This is critical to avoid the pitfalls of starting the assessment upstream (e.g. agriculture), which carries the risk of identifying actions that would fail to translate into better diets for children because of other moderating factors in the broader food system, in particular within the supply chain and within households. Similarly, it avoids the limitations of remaining at the level of individuals and households, without addressing the upstream elements of food systems. Where possible, double-duty thinking to address both under- and overnutrition should be applied to all interventions, as the causes of undernutrition and overweight are very similar.

Table 6: Threats and opportunities towards a nutrition-sensitive and child-centred food system

	Food supply chains	Food environments	Consumer behaviour
Threats	• Overt focus on increasing production of staple foods • High cost of fruit and vegetables • Corporatisation • Gaps, contradictions and incoherence in food and nutrition related policies • Unemployment and poverty	• Obesogenic school food environments • Marketing of unhealthy foods to children • Rising cost of healthy food • Lack of complementary interventions to enhance social protection	• Inadequate capacity and resources to deliver nutrition interventions • Vulnerability of children to inappropriate marketing • Availability and affordability of highly processed food of poor nutritional quality
Opportunities	• Produce foods that contribute to nutritious, safe, affordable and sustainable diets • Create livelihoods in the formal and informal food economy • Use public procurement for institutional and school feeding to stimulate local food production • Limit manufacturing of unhealthy food options	• Adopt pro-equity policies • Apply HPL towards healthy food environments for children • Make healthy food cheaper than unhealthy food options • Provide targeted income support and social protection • Prohibit marketing of unhealthy food to children	• Align school feeding and nutrition education in schools with healthy and sustainable eating guidelines • Equip health professionals with relevant social marketing and advocacy skills and integrate social justice and ethics into the education of marketing, agriculture and business graduates • Mandate front of pack labels on unhealthy packaged foods • Establish a mandatory nutrition information system at all food outlets • Cap unhealthy options at food outlets e.g. no up-sizing • Promote healthy eating

When these actions are environmentally sensitive, they become triple-duty actions[54] – the ultimate objective – good for people and the planet.

Opportunities for intervention

It is clear that solving the double burden of malnutrition in South Africa will not come through a single intervention or in a short time. It requires sustained, multiple, small interventions that are well-aligned and coordinated to meet a common vision. These interventions will have to deliberately incentivise all actors in the food system to prioritise children and should aim to address multiple issues simultaneously. See Chapter 9 for a discussion of double-duty actions designed to address the double burden of malnutrition. The effectiveness of actions will also depend on the political economy[55] at local, national and global levels (Table 7 provides some examples of such actions).

In essence, these interventions should be informed by a food systems approach that aims to improve nutrition through enabling the engagement of actors at all levels of the system. A systems approach would focus on how these actors connect and reinforce one another to ensure the food system delivers healthy, affordable and sustainable diets to children. Taking such an approach would prioritise the design of new agricultural and food system policies to support healthy diets.

An example is that of improving the affordability of nutrient-rich foods, both economy-wide and for the poorest households. For the poorest households, affordability could be increased by targeted income support, nutritional assistance and agricultural development programmes that encourage diversification and consumption of home-produced foods. At the level of a whole economy, this could be done by achieving lower prices through improved agricultural and trade policies.

Threats to the food supply chain, food environment and consumer behaviour have already been highlighted earlier in this chapter and are reflected in Table 6, together with opportunities to create a more nutrition-sensitive and child-centred food system.

Although there are particular opportunities where "pockets" of food systems dedicated to children exist, such as school nutrition programmes, a child-sensitive food system implies a changed approach to the food system in the country as a whole and requires political and economic interventions to transform food supply chains, food environments and consumer behaviour, as illustrated in Table 6.

Within the food supply chain, the production of food, both agriculturally and commercially should consider the diversity of food supply with conscious decisions framed by a pro-health, pro-nutrition, pro-equity approach. This should not be left to individual producers opting-in, but should rather

Table 7: Examples of child-centred, nutrition sensitive and pro-equity activities

Where	What
Political system	Make healthy foods cheaper than unhealthy foods, particularly fresh foods over ultra-processed foods.
	Develop political will to overcome financing, infrastructure, land tenure and trade policy to support a supply of healthy food in South Africa.
	Increase targeted income support and social protection including food relief that nurtures human health and the environment.
	Use public procurement strategies and investments in the public sector (e.g. the NSNP) to ensure a healthy food environment.
	Regulate food environments in and around education and care facilities such as schools and ECDs.
	Extend the HPL to tax unhealthy food items (i.e. foods high in sugar, salt, saturated fat and trans-fat).
	Ensure safe environments for children. Safe in terms of peace keeping so that physical movement through play can be encouraged, but also safe living conditions including safe water, sanitation and refuse removal services in homes, schools and care facilities as the absence of these often results in unsafe handling of food.
Economic system	Make healthy food choices the easy option by clearly identifying unhealthy foods through front of package labelling (FoPL) and similar information on ready-to-eat and menu options at food outlets.
	Make healthy food (specifically vegetables and fruit) cheaper than unhealthy food (through subsidies or a voucher system).
	Tax unhealthy food items.
	Regulate marketing of unhealthy foods to limit the power of corporations to structure consumer perceptions on food quality and desirability.
	Regulate proliferation of unhealthy food products. Consider a food and nutrition review of proposed new food products.
Food supply chain	Align the agriculture and food production agenda with positive nutritional outcomes for children and adolescents to deliver nutritious, desirable, affordable food from sustainable sources.
	Create tasty foods that are healthy (adhere to criteria for nutrients of concern) and in line with the Food-Based Dietary Guidelines. Limit proliferation of unhealthy food products.
	Revitalise and diversify local food systems to reduce the contribution of transportation to climate change and to create livelihoods in local agriculture, manufacturing and distribution of healthy foods.
	Foreground healthy diets for children as primary objective in actions to promote food security and economic growth.
Food environments	Promote eating patterns that nurture human health and the environment.
	Increase programmes that support and encourage consumption of locally produced healthy food.
	Provide a healthy NSNP that complies with the DBE stipulated 30% of recommended daily nutrition and procure locally produced food when possible.
	Ensure NSNP and ECD programmes serve healthy food and that the food environments at schools and educare facilities do not market or sell unhealthy food options.
	Make healthy foods cheaper than unhealthy options.
	Introduce incentives to ensure health facilities, clinics, schools and ECD programmes uphold pro-health, pro-equity, planet friendly principles.
	Incentivise the sale of healthy prepared foods (e.g. at transport nodes and commuter routes) and provide supportive infrastructure that allows safe production and storage of healthy prepared food.
Consumer behaviour	Link pro-health and pro-nutrition measures to social protection programmes to encourage healthy food choices and more physically active lifestyles in safe environments for children. For example, through the introduction of a voucher system as described below.
	Make healthy food choices the easy option by clearly identifying unhealthy foods through FOPL of packaged foods and similar information on ready-to-eat and menu options at food outlets.
	Include appropriate information on healthy sustainable eating in basic education, health services, social services, etc.

Note: Many of these activities are discussed in more detail in following chapters.

fall within an overarching framework that encourages general compliance. Minimum guidelines for producers may be needed and government procurement for food provisioning through hospitals, prisons, schools, ECD programmes, social development food relief, amongst others, should be aligned with these guidelines. The inclusion of locally produced fresh produce in the Brazilian school feeding programme provides an example of such an approach. The environmental footprint of all food production and packaging should be guided by minimum criteria prioritising health and the environment over profit. In some cases, targeted government strategies to ensure that healthy food will be available at a cheaper price than unhealthy food options may be required. Subsidisation of vegetables and fruit may be considered.

A pro-equity alternative could be a targeted subsidisation of the most vulnerable through a voucher system linked to social grants. Such a voucher system would facilitate the purchase, preparation and distribution of fresh vegetables and fruit at prices that are fair to the farmer, whilst the retailer or vendor can claim a specified amount linked to the difference in price from a central source. This may incentivise healthy food procurement as it will essentially provide additional financial support on top of the relevant grant.

Strategies that should be considered to shape innovation

Case 4: Taxing sugary beverages is good for children

Susan Goldstein, Nick Stacey, Aviva Tugendhaft, Agnes Erzse, Karen Hofman[i]

Childhood obesity rates are high in South Africa – with 13% of 6 – 14-year-olds being overweight or obese – and significantly higher than the global prevalence of 10%.[63,64] Children who are overweight and obese are more likely to be obese into adulthood and develop non-communicable diseases at a younger age.[3] Childhood obesity has been linked with increased rates of cardiovascular disease, type two diabetes, as well as social and psychological problems, both during childhood and later in life.[66]

According to the World Health Organization, people should not consume more than six teaspoons of sugar a day. Most 330ml fizzy sugary beverages contain nine teaspoons of sugar, while fruit juices have 10. The carbonated sugary drinks have almost no nutritional value, do not satisfy hunger and are particularly harmful to the body in liquid form.[65,67,68]

In a review of obesity and sugar-sweetened beverages (SSBs), good evidence was found that drinking SSBs incrementally contributed to overweight and obesity in children.[69] Between 2005 and 2010, South Africa has seen a doubling in the consumption of SSBs.[69-71]

South African modelling has shown that a tax on sugar can save 72,000 lives and R5 billion in health service expenditure.[72]

How do children benefit?

Losing weight is often difficult for obese people, with most interventions focusing on individual diets and failing to sustain successful weight loss over the long term, so it is best to build healthy eating patterns from a young age.[73] It has also been shown that children's eating preferences are determined by their parents and the availability of nutritious food. Therefore, in line with the South African healthy eating guidelines, promoting good (and affordable) nutrition from childhood is an important prevention intervention to improve immediate and long-term health and quality of life.

Taxing the sugar content of SSBs has a number of potential benefits for children. Firstly, poorer households and children will buy fewer SSBs, increasing the possibility of spending that money on healthier food which is a positive step. Secondly, the structure of the SSB tax in South Africa encourages manufacturers to decrease their sugar content. Thirdly, children are influenced by their parents' drinking habits so if parents consume less this will have a positive influence on children.[74,75] Finally, the tax raises awareness about the harm that SSBs do in our society.

For example, before the introduction of the tax there was extensive media coverage, and a poll on News 24 found that 47% (11,992) of respondents were in support of a sugar tax. A further 28% (7,012) readers were not in favour of it, while 25% (6,492) did not care. As anticipated, after the introduction of the tax, carbonated beverages prices increased significantly compared to non-taxed beverages. Many manufacturers decreased the sugar content to avoid the tax, thus making the drinks healthier. [76]

The sugar tax alone will not solve the double burden of malnutrition in SA, but it will help decrease the harmful consumption of SSBs by children.

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in the production of packaged foods include restrictions on the marketing of unhealthy foods to children, FoPL to identify foods high in nutrients of concern, and a review of proposed products prior to production, with the purpose of limiting the proliferation of unhealthy food options flooding the market. These guidelines should apply equally to imported products. Where reformulation of products is considered to comply with the reduction of nutrients of concern, particular attention should be paid to unintended consequences that may put children at risk, such as marked increase in use of artificial sweeteners following the introduction of the HPL in South Africa.

Within food services, menu guidelines should prioritise nutritious foods and cap the proportion of unhealthy food choices. Urban planning should manage and restrict the density of unhealthy food outlets within neighbourhoods, while simultaneously facilitating healthy food outlets – where possible supporting small-scale livelihood-creating enterprises.

Opportunities for sharing information on healthy eating (both from an individual perspective and a planetary perspective) should be optimised and aligned across all government and non-government structures. As an example, a school setting that is pro-health, pro-nutrition and pro-equity would imply that the information provided as part of life orientation in the school curriculum, the food available as part of school feeding, the items available for sale in and around school, the management of the school and sports grounds, and the sponsorships of school events should all be aligned and support the "pro" principles. How the sports grounds at a school are managed should be as health-promoting as the items for sale from vendors.

Policy and regulations in the South African food system

Individual dietary practices and food choices are directly dependent on the external food environment and other factors such as poverty and inequality. These limit the food choices of people living in poor households and contribute to unhealthy dietary practices, often driving a vicious intergenerational cycle of malnutrition, poverty and ill health.

Government can – and should – shape the food system to benefit the poor and most vulnerable. Several 'hard' and 'soft' governmental policies[56] should be part of a strategic plan, based on pro-equity, pro-health, planet-friendly and child-centred principles, to ensure effective action.

Food policies are significant factors that influence food and nutrition security. The South African government has a myriad policies and strategies in place hosted by different departments and with different objectives, some of which are in line with international policy frameworks.[34] Evidence indicates that the potential of these policies and legislative mandates is undermined by inadequate and ineffective implementation as well as incoherent actions and interventions undertaken by stakeholders from different parts of the food system, and across different sectors. Policy initiatives of different accounting structures contain gaps and contradictions, with minimal structure for coordination, co-creation and cooperation.[57] For example, the Child Support Grant – one of the most comprehensive social protection systems in the developing world – is reported to reduce absolute food insecurity and to have positive impacts on early child growth.[57, 58] However, high rates of stunting persist in households receiving the grant, with evidence indicating its relatively low value has been undermined by rising food prices, high unemployment, lack of coordination with potentially complementary interventions and the ready availability of cheap, non-nutritious foods.[59, 60]

The situation is aggravated by inadequate capacity and resources (e.g. nutrition professionals and community health workers) that compromise the quality and reach of existing interventions.[61] As a result, South Africa's policy aspirations remain far from the real lives of many South Africans.

Conclusion

The food system has consistently failed those trapped by the structural underpinnings of inequality, with a confluence of systems undermining their ability to access safe, nutritious and affordable food. Without radical transformation involving government policy reform, widespread grassroots and civic action and accountability throughout society, the food system will continue to be dominated by cheap, unhealthy, ultra-processed food products, and healthy foods will become increasingly unaffordable. Ecological costs are outstripping the ability for nature to heal and regenerate, and future generations will be condemned to passing on intergenerational poor health and inequality.

A coordinated and coherent nutrition-sensitive approach across multiple sectors would help move the food system towards a pro-poor, pro-health, sustainable and child-centred focus and complement existing nutrition and health system strategies to optimise children's nutrition, health and development, as illustrated in Figure 6. As the food system is directly influenced by health, water and sanitation, environmental, technological, political, economic, social and demographic drivers, it is essential that these sectors are also sensitised about their roles and responsibilities in improving

children's nutrition outcomes by ensuring that healthy foods are available, accessible, sustainable and easy to use.

This can be achieved through the use of incentives and disincentives that encourage actors across food supply chains to protect, promote, and support healthy diets for children. Such initiatives could include support for innovation through tax subsidies funded through the HPL; the creation and support of livelihoods in the informal food production sector; the diversification of agriculture in line with local guidelines for healthy eating; nutrition-focused financing policies; local procurement; investment in infrastructure such as safe and adequate housing, water, sanitation; and a review of social protection strategies to shield the most vulnerable.

Case 5: Challenges and opportunities for water, sanitation, hygiene (WASH) and infant nutrition in South Africa

Douglas Mombergⁱ

There is a growing recognition of how environmental conditions, including inadequate access to water, sanitation and hygiene (WASH) contribute towards poor child health outcomes.[77]

Each of these components represents a separate field of work, which is dependent on the presence of the others. For example, without toilets, water sources become contaminated; without clean water, basic hygiene practices are not possible; and the provision of handwashing facilities and soap is essential for good hygiene.[78]

Relationship between WASH and nutrition

The UNICEF Conceptual Framework[79] recognises how child malnutrition is shaped by both dietary intake and disease, and how these immediate causes are shaped by household food security, living conditions and access to health care services. The Lancet series on Maternal and Child Nutrition in 2008 & 2013 highlighted how hand washing, water quality, treatment, sanitation and hygiene could help reduce the incidence of diarrhoea by 30% and therefore reduce the risk of stunting. Drawing on these findings, the Lancet Maternal and Child Nutrition Frameworks have incorporated WASH as an essential element of their multi-sectoral approach to promote young children's development – advocating for access to clean water, sanitation infrastructure, and the promotion of hygiene behaviours across the life-course.[80-83]

Although the links between WASH and nutrition seem quite straightforward, the interactions and determinants are not linear. Findings from a recent systematic review demonstrated that the literature covering the links between WASH and nutrition often only considers individual components, either water, sanitation, or hygiene, or a selective configuration of the three components with WASH as a consolidated concept rarely featuring.[84]

These incongruous findings have made planning interventions more difficult. Recent results from randomised controlled trials on the effect of WASH interventions have echoed this and demonstrated only a marginal effect of WASH interventions on linear child growth.[85-88] In addition, low-cost WASH interventions often fail to improve health because they require much more user effort, time, and compromise than is required from residents of high-income countries.[89] On the other hand, other studies have suggested that the smallest deviations from behaviour, such as water treatment, can have disproportionate effects on health-related outcomes.[90]

Access to water and sanitation

The Sustainable Development Goals (SDGs) aim to ensure universal and equitable access to safe water and adequate sanitation and the National Development Plan (NDP)[91] aims to increase the percentage of households with access to a functional water service by 2030, thereby also contributing to SDG 6.[92]

In 2015, 89% of South African households had access to piped or tap water – 46% of households had access to piped water in their dwellings, a further 27% accessed water on their property, while 14% relied on communal taps, and 3% relied on neighbours' taps.[92,93] Although household access to water generally improved, 4% of households still had to fetch water from rivers, streams, stagnant water pools, dams, wells and springs.[92,93]

While the proportion of people with access to an improved water source has increased, the standards for this access have not been maintained at the same rate, and the percentage of households with access to a water service which was "available when needed" declined over the same period – from 64% to 50% in rural areas; and from 94% to 82% in urban settings.[94] As a result, the share of

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households in urban areas with access to a safely managed water service declined from 90% to 82% between 2006 and 2017, despite this being an SDG indicator.[94]

In terms of sanitation coverage, the percentage of households who reported living more than 200 meters away from the outside yard toilet facility increased from 1% in 2014 to 6% in 2015 and over the same period approximately 270,000 South African households still relied on buckets.[92] In 2019, 7% of people in informal dwellings still practiced open defecation, predominantly due to a lack of convenient access to hygienic sanitation facilities.[94] Where open defecation, poor drainage and high population densities occur simultaneously, it increases the risk of gastrointestinal infections, worms and cholera, particularly for children. The most recent South African General Household Survey (2018) pointed out that progress in terms of sanitation provision has stalled, with the final 20% proving to be the most difficult to address.[95]

The past decade has seen significant increases in children's access to water, sanitation, and formal housing, however there has been little or no change in the proportion of children living in informal housing.[94] While part of the improvements in access to water and sanitation is driven by increased urbanisation, approximately 43% of children still reside in rural areas which are the least provisioned with WASH infrastructure with significant differences remaining within and between provinces.[94]

WASH and Nutrition Policy Environment in South Africa

A range of policies advocate for multi-sectoral approaches to improve children's nutritional status, including the National Food and Nutrition Security Plan for South Africa,[96] the National Sanitation Policy,[97] and the National Integrated Early Childhood Development Policy[98]. Yet none of these policies explicitly link WASH and nutritional status in children nor do they provide clear guidance on how WASH should be operationalised in order to address the burden of child malnutrition.[99]

Sustainable access to water and sanitation at scale also depends on good governance, financial resources and technical factors such as infrastructure and improved knowledge. While the primary responsibility for service delivery of water and sanitation lies with the state, a number of stakeholders take part in the implementation including local government and private contractors. Yet party politics, competing priorities between different levels of government, limited managerial capacity, poor financial resource administration, corruption and weak institutions, all limit government's capacity to deliver sustainable results at scale.[100]

Operationalising WASH to address undernutrition

Addressing the challenge of maternal and child malnutrition has proven particularly difficult. Complicating this are infectious disease outbreaks which are occurring more frequently and affecting a growing number of people. The World Health Organization and UNICEF have highlighted how safe water, sanitation and hygienic conditions are essential for protecting human health during infectious disease outbreaks such as COVID-19.[101] While the expectation that increased attention to WASH and improved WASH behaviours, such as regular hand washing, will help reduce the incidence of COVID-19 and other infections that may affect nutritional status, access to WASH infrastructure has not improved at the same rate as the health and hygiene messaging. It is therefore imperative to note that it is impossible to ask mothers and children to regularly wash their hands if there is not sufficient access to WASH infrastructure at home or at school. The lack of local and district level data has also made it difficult to draw direct links between the provision of WASH infrastructure and the nutritional status of children.[99]

This is further confounded by several factors. Firstly, the associations and interactions between WASH exposures and growth outcomes are not necessarily linear. Secondly, WASH indicators are not necessarily standardised or sensitive enough to affect the desired complex biological changes intended, such as improving linear growth. Thirdly, children's sensitivity to environmental exposures changes across the life course so the timing of WASH interventions is also critical. Indeed, a recent study conducted in Soweto demonstrated that water, sanitation and hygiene are all risk factors for undernutrition in the first year of life, yet hygiene has greatest impact during the first month of life where it helps reduce the risk of stunting and overweight, access to water has the greatest impact when a child is around 12 months old helping to reduce underweight,[102] while access to safely managed sanitation facilities is critical throughout the first year of life reducing the risk of stunting, wasting and underweight. Improvements to both household and community level sanitation are therefore required in order to improve child nutrition. In addition, it is important to develop age-appropriate indicators in order to better target interventions.[102]

Recommendations

Based on these findings, several recommendations have emerged. This includes:

- The establishment of a database of tools, policies and implementation strategies around best practice at national, provincial and local levels of government.
- A national dashboard of priority indicators to strengthen monitoring and accountability.
- The integration of data at national, provincial, district and ward levels (including indicators for nutritional status and relevant health-related outcomes) to drive effective intersectoral action.
- The use of consistent terminology and indicators, such as those recommended by the SDGs.
- The integration of government and associated actors and stakeholders, including non-governmental and community-based organisations into scientific studies, to ensure better integration between research, policy and programming.

The current context of COVID-19 has placed a spotlight on the importance of WASH and its role in preventing infection and we would be remiss if we did not try and capitalise on the momentum that this has created.

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Corporate fast-food advertising targeting children in South Africa

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The health implications of children's increasing consumption of fast foods have been a subject of growing national and global concern. This chapter explains why critically examining corporate fast-food advertising to children is equally important. As we show, fast-food advertising compromises children's rights to health. It also undermines their rights to protection from exploitation through persuasive media messages and rapidly changing foodways.[ii]

Children's relationships to foods have traditionally been mediated by parents, caregivers, authority figures in schools and other institutions or the communities in which they live. In the context of the world food system,[iii] fast-food advertisements may have become more influential than these traditional mediating agents.

This chapter addresses the following questions:

- Why does fast-food advertising targeting children warrant research and action?
- How does fast-food advertising manipulate children?
- What is the impact on children's tastes and eating habits?
- What are the political, social and ethical implications, and responses?

Why does fast-food advertising targeting children warrant research and action?

The growing dominance of global foodways

South African children's fast-food consumption rates are high. In a 17-country study completed in 2014, researchers found that fast-food consumption among South African children and adolescents was more frequent than in even high-income countries such as Japan and Belgium.[1] Fast foods are produced by local and global companies, although global corporations are the dominant drivers of child-oriented food and marketing. Transnational corporations are increasingly targeting children in developing countries because their own markets have become saturated. Moreover, regulations in these countries have made sales and advertising more difficult.[2] Global companies such as Kentucky Fried Chicken (KFC), McDonald's, and Spur are therefore intensifying marketing strategies in India, China, Brazil, and South Africa, and it has been found that South Africa and India are more receptive markets than Brazil, Russia, and China.[3]

The dominance of corporate-driven foodways is unique to the present world food system. Within this system, North American food corporations are the most economically powerful. These corporations identify children as lucrative markets because children are highly responsive to new tastes. They also often influence the food tastes and purchasing of their parents and communities.[4] Like children in other parts of the world, therefore, South African children are instrumentalised as consumers of unhealthy foods in order for corporations to generate enormous profits.

The exploitation of children

Food companies and advertisers realise that children with "pester power" (or influence over adults)[5] will significantly influence adults' food buying. They are also aware that cultivating fast-food tastes among children will shape their future consumption as adults. Companies' tactical interest in children is reflected in research showing that the global fast-food industry spends over USD 5 million daily in marketing unhealthy foods to children.[6] Fast-food marketing to South African children is swiftly penetrating different media. Remarking on this situation in Malaysia, some researchers show that existing research and regulations have "focused on traditional media…although…digital or new media marketing expenditure saw a three-digit percentage growth from 2005 to 2009".[7]

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ii Foodways are the cultural and material flows of food items and tastes within families or communities or within societies and across national borders. In the current world food system, these flows are significantly influenced by the production, sale, and marketing of highly processed food produced through corporate-controlled industrial agriculture.

iii The world food system currently involves large corporations controlling the food access and consumption of most of the world's population – from the production of food through industrial agriculture to its sale in globalised supermarkets and other food outlets.

Fast-food advertising directed at children has been analysed extensively in high-income countries such as the United States, the United Kingdom and Australia. This has not been the case in South Africa, where research has prioritised malnutrition linked to stunting and undernutrition.[8] Yet, Lize Mills notes that "overweight and obesity, which show a greater increase in low- and middle-income countries, are linked to more deaths in the world than underweight".[9] With corporate fast food becoming increasingly affordable and accessible, many of the processed products that lead to overweight are fast foods.

The need for regulation and research

At a global level, the advertising of fast food to children has provoked strong opposition and action. This has entailed self-regulatory mechanisms for advertisers and corporations, such as the Advertising Regulatory Board in South Africa. Organised and funded by the marketing industry, the Board is meant to protect consumers through the self-regulation of advertising. Global efforts to regulate marketing have also included industry performance indicators, community and school-led advertising literacy campaigns for children, individual or class action litigation, and local and national regulations.

In 2010, the 192 member states of the World Health Organization (WHO) endorsed recommendations to restrict unhealthy food marketing to children through actions including national legislation.[10] The WHO's comprehensive and intersectoral recommendations for member states are summarised in Box 4.

As a member of WHO, South Africa has still not enacted legislation on this issue, even though draft legislation exists. Considering the scale of advertising to children, media coverage, public awareness, and research in South Africa have been limited. The small pool of academic research has focused mainly on televised adverts.[11] By concentrating on government legislation and self-regulation by industries, South Africa has also neglected the intersectoral responses recommended by the WHO.[4, 9, 12] In contrast, fast-food companies have invested enormous amounts into research for effective marketing. They "employ child psychologists and cultural anthropologists, review academic literature…send experts into homes...study children's drawings, dreams and fantasy lives, and apply the findings to ads and product designs".[13]

How does advertising manipulate children?

The WHO states that the impact of advertising on children results both from their level of exposure and from its persuasive techniques.[10] The adverts analysed below are powerful in terms of both these criteria.

Box 4: Key recommendations on the marketing of foods and non-alcoholic beverages to children

- Food and beverage companies, food outlets, marketing industries, and the media and entertainment industry should promote healthy diets for children and youth.
- Governments should partner with the private sector to create long-term programmes to support adults in promoting healthy food for children.
- State and local educational authorities should support healthy food for children in school environments.
- Government should use available public policy levers at all levels to foster healthy diets for children and youth.
- National multi-disciplinary research capacity should address the influence of food marketing on children and youth.

Source: World Health Organization. *Set of Recommendations on the Marketing of Foods and Non-alcoholic Beverages to Children*. 2010. Accessed 17 November 2020; https://www.who.int/dietphysicalactivity/publications/recsmarketing/en/.

Manipulating children through promises of "home"

Many fast-food adverts use fantasies of "home" to mould children's perceptions of food. For example, an advert from McDonald's "Momentsoflovin'" campaign (see Figure 1) tells the story of a young girl sharing "lovin' moments" with her father, from early childhood to adulthood.

The emotional power of the advert comes from the intimacy of these shared moments at McDonald's. The intensity of these moments is enhanced by the fact that the two do not speak: emotions are conveyed by their expressions and written notes to one another. The advert emphasises how the corporation is an integral part of the child's journey to adulthood, and this association between fast food and her valued memories will lead to her long-term brand loyalty. The advert exploits children's elemental needs for parental love and home, positioning a fast-food brand as central to fulfilling these needs.

Promoting valued identities

Another McDonald's advert tells a story about a schoolchild who chooses an uncomfortable cheap seat in a taxi in order to save money to buy a "Quarter Pounder with cheese". The advert concludes with him triumphantly showing off his

Figure 9: McDonald's "momentsoflovin" advert

Source: https://www.youtube.com/watch?v=ru0pz4jXJfs

McDonald's meal to his ice-cream-eating friends and joining the table of adult men eating burgers.

The child in Figure 10 is portrayed as an enterprising agent of change. While he is obviously poor, he strategically saves the money his grandmother gives him for taxi fare. Buying, displaying, and eating McDonald's food become a means through which the boy acquires valued gendered and classed identities. His school friends' immaturity in eating (unbranded) ice-creams is contrasted with his precocious manliness in buying a burger, seating himself among men, and greeting them with the words, "Yebo, Madoda". Considering that this is an advert for food, it is striking that no reference is made to his appreciation of its taste.

Exploiting children's rights to decision-making

As the largest fast-food chain in South Africa, KFC has addressed demographics that other food advertisers tend to neglect. This is evident in a KFC social media advert with the slogan, "There is nothing more annoying than having your head used as a napkin by your elders" (see Figure 11). The advert is set in a rural context where a poorly dressed boy interacts with his stereotypically traditional grandfather. After eating, the old man routinely wipes his hands on the boy's shaved head. Frustrated by this, the boy buys a KFC meal to share with his grandfather, whose enjoyment of the meal leads him to lick his fingers instead of wiping them.

Figure 10: Advert for McDonald's cheese burger

Source: https://www.youtube.com/watch?v=PgB0IiZTLak

Figure 11: KFC's finger lickin' good advert

Source: https://www.youtube.com/watch?v=zj_F-N2iKNo

This advert creates two troubling messages. First, it implies that a poor rural South African child has the resources to purchase fast food spontaneously. Consequently, it completely obscures how poverty compromises many South African children's food choices. Secondly, it exaggerates the agency of children in creating valuable eating patterns.

The advert plays on the KFC slogan of "finger lickin' good" in its story of how a rural child transforms the eating habits of a traditional patriarch. This crude popularising of children's agency and right to participate in decision-making has been used to serve the profit-making interests of many companies advertising products to children.

What are the effects of advertising on children's tastes and eating habits?

As the KFC example shows, adverts often define children as the active shapers of their own – and others' – food tastes. The following analysis discusses the effects of advertising on 5 – 8-year-old children in a community of South African diaspora Indians living in Durban.[iv]

Displacing family foodways

This sample study revealed that children and parents often negotiated meal choices. Adults were the overall gatekeepers of children's food consumption, but they allowed discussion about foods for family celebrations, and children usually chose fast foods. Although this may not be adults' intention, this further reinforces a manipulative advertising message: namely, that fast foods are always special and fun, whereas healthy and home-cooked meals are dull.

According to adult respondents, their young children are creating new patterns of influence around food eaten in the home because of their fascination with fast food. Fast foods have also had an influence on local foods such as those in Figure 12, as well as meals prepared at home. Interviews indicated that home-cooked meals include at least one fast-food item alongside other traditional dishes. Sometimes traditional dishes are infused with fast-food favourites such as melted cheese and French fries. These blended meals illustrate how family foodways in the sample have been transformed, often as a result of children being influenced by advertising. Interviews with parents in Durban therefore confirmed findings by other researchers that "the degree to which parents perceive fast-food consumption as socially normative are associated with children's greater fast-food consumption".[14]

Figure 12: A popular blended dish of curry and French fries wrapped in a roti

Source: https://www.google.com/search?q=sunrise+foods+durban&tbm

Manipulating children's emotions

Children in the sample study were frequently exposed to television and to brand logos and animated characters in adverts. They also often engaged with fast-food marketing through social media. Some children who played "advergames" were unaware that these games promoted McDonalds and that children were being targeted through embedded advertising messages. This confirms Sandra Calvert's claim that children under eight are especially responsive to stealth techniques in advertising, including the use of digital interactive technologies.[15] For example, the use of Instagram allowed some children to follow a food brand by liking, sharing, or commenting on posts. Consequently, in ways that parents may not realise, their children are developing intimate and loyal attachments to fast-food brands through social media advertising.

Parents stated that children want to recreate the social milieu that adverts connect to fast foods. Because of advertising's enticing effects, children feel that they are almost part of the popular Disney movies and television shows often associated with these meals. Interviewed parents explained that their children attached feelings of longing and excitement to fast-food consumption, often mimicking the enthusiasm and excitement demonstrated in adverts.

Children's widely advertised ability to select from a variety of options was another reason for their enthusiasm about fast food. As Jennifer Patico and Eriberto Lozada explain, choice has become a hallmark of children's acquisition of a sense of "modernity" through globalised fast foods produced

iv Telephonic interviews were conducted with parents of children during April 2020 (COVID-19 pandemic lockdown period). Purposive sampling was used to identify parents whose children were between the ages of 5 and 8 years. Five adults were interviewed about their own observations of children and their memories of past and evolving patterns.

Case 6: Food, malls and the politics of consumption

Sophie Chevalier[i]

Children are not only confronted with industrial food and fast food promoted by the multimedia at home, but also in supermarkets and shopping malls).[24] For safety reasons most children are not allowed to roam in public. But malls are a place of licensed freedom for middle-class teenagers (from 10 years up). There they can meet their friends after school, often snack in cafes, stroll around in shops and go to the cinema – without adult supervision. Parents, who pay for it all, participate in choosing the film, but often not the meal afterwards. Children's spending money usually only allows them to eat in a fast-food outlet. This is preferable since they are spared the restaurant culture with its delays, waiter service, ordering from the menu and eating with cutlery. Food halls are often close to cinemas and the latter sell sugar-sweetened beverages, popcorn and sweets for consumption while watching.

Hanging out in malls allows teens freedom of movement in a closed and protected space, but the standardized food, international movies and clothes designed for their age group also connect them to a global culture, along with pop music, international blockbusters, YouTube, Instagram, and global commerce. This experience constitutes an extended "rite of passage" to adulthood, framed by a neoliberal market geared to globalized mass consumption. Food must be analysed as one element of this broader set of commodities that target children and adolescents.

by corporations such as KFC.[16] This "modernity" signals a paradigm change in liberal democracies, where children are socialised as the bearers of human rights. They are regarded not only as subjects of parental authority, but also as individuals with choices of their own. In her North American study, Amy Best describes how one fast-food advert capitalised on this. The advert depicts a child being told when to get up, being forced to do her homework, and being reprimanded for wearing certain clothes. She feels free to choose only when she stands in front of a fast-food counter to order and declares: "'But at Subway I have the power to choose, and I eat it all up.'"[17]

Parents also stated that children were drawn to imagery depicting fast foods in relation to family entertainment and bonding, and adverts encourage children to locate fast foods as a central part of their fantasies and thoughts about home and family life.

What are some of the political, social and ethical implications and responses?

It is unsurprising that both McDonalds and KFC donated food to needy South Africans during the country's lockdown response to COVID-19.[18] Philanthropic marketing strategies are designed to increase the popularity and growth of fast-food companies. They market themselves as generous supporters of families and communities, offering choices in a world where all individuals, including children, are free to make them. Yet analysing fast-food adverts and their effects on children reveals how they restrict children's scope to make healthy, age-appropriate, and informed choices.

Children are a special category, requiring both the right to freedom and the right to guided development. Fast-food advertising, which compromises their health, exploits their consumer status, and manipulates their behaviour, therefore demands multiple, coordinated responses. A legislative route would be guided by the best interests of the child as a principle enshrined in the South African Constitution and by the country's ratification of various treaties.

South Africa seemed ready to meet the WHO's call for state action when it introduced amendments to its Foods, Cosmetics and Disinfectants Act in May 2014. As explained in Case 7, the Department of Health's proposed R429 regulations aimed to prohibit the advertising of unhealthy food to children. They were also intended to ban celebrity endorsements and promotions of unhealthy food to children under the age of [18.19] Since the draft regulations have still not become law, the delayed legislation around fast-food advertising to children urgently needs to be enacted.

Critical responses beyond legislation also warrant attention. At present, the regulation of advertising to children in South Africa relies mainly on self-monitoring by food industries and marketing companies. Because their primary goal is to make profits through lucrative child markets, they cannot be relied on to address children's needs and rights. In fact, critical research has established that even when food industries formally commit themselves to responsible advertising, unethical and unhealthy advertising targeting children can continue. For example, Oliver Huiszinga and Michaela Kruse show that European food industries' signing

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Case 7: Regulating the marketing of foods to children in South Africa: Are regulations necessary?

Mariaan Wicks[i]

The prevalence of childhood obesity has increased globally, especially in low- and middle-income countries.[25,26] In South Africa, overweight and obesity affects 13% of young children (0 – 5 years) and 17.4% of adolescents (15 – 19 years).[27] Childhood obesity is a strong predictor of adult obesity,[28] which holds major health and economic consequences for individuals, their families and society as a whole.[29-31] The marketing of unhealthy foods and beverages to children has been identified as a key driver in the global childhood obesity pandemic. Frequent exposure to food marketing influences children's food knowledge, preferences, consumption, diet quality and health.[32,33]

In 2010, the World Health Assembly endorsed a set of recommendations to regulate the marketing of food and non-alcoholic beverages to children.[34] This was followed by similar measures to limit marketing of unhealthy foods to children in the Global Action Plan for the Prevention and Control of NCDs 2013 – 2020.[35] The *South African Marketing to Children Pledge*, a form of self-regulation by the food industry, was adopted by the Advertising Standards Authority of South Africa (ASASA) in 2008. Signatory companies pledged to use marketing communications that support healthier food choices by limiting unhealthy food marketing to children twelve years old and younger during specified timeslots.[36] However, participating companies have yet to develop their own action plan and no specific nutrition criteria exist to define unhealthy food products. Research indicates that industry self-regulation has been ineffective in reducing children's exposure to unhealthy food marketing.[37] In 2014, the South African Department of Health published draft regulations (R429) relating to the labelling and advertising of foods[38] which aim to restrict the marketing of unhealthy foods to children. Guideline 14 of the draft regulations (R429) provides specific criteria relating to the age of children (0 to 18 years), the timeslots in which unhealthy food marketing may not occur, the type of health messages used, and the definition of unhealthy foods. The draft food marketing regulations were followed in 2015 by the Strategy for the Prevention and Control of Obesity in South Africa 2015 – 2020[39] which also aimed to ensure responsible and ethical marketing of food by the food industry. Research indicates that such policy interventions are of high priority due to their potential population-wide effects, cost-effectiveness and sustainability,[40,41] yet no official action has been taken in South Africa to date.

Research into child-directed food marketing in South Africa is limited. Delport and colleagues (2015) set out to investigate the various marketing techniques used in food and non-alcoholic beverages television advertisements aimed at children in South Africa. During the months of April, June, September and November of 2014, all advertisements aired on the four free South African TV channels were captured from 06:00 to 22:00. Of the advertisements captured, 21% were of food and non-alcoholic beverages of which 47% were aimed at children. Marketing techniques included the use of child actors (80.5%), tie-ins to popular television shows and cartoon characters such as Spongebob Squarepants® and Spiderman® (9.9%), and advertising during children's programmes (9.6%). Many of the adverts also used wording such as "good food made for great kids" and "smarter, tougher, faster". Food and beverage advertisements were primarily aired during family viewing time and included fast foods (20%), sweets, confectionary and savoury snacks (15%), supermarket promotions (14%), sugar-sweetened beverages and energy drinks (11%), breakfast cereals (9%) and alcohol (7%).[42]

These findings support the need for progressive restrictions on the marketing of unhealthy foods to children in South Africa. Unhealthy foods are easily accessible, affordable and convenient with children in the poorest household frequently having the highest levels of exposure.[43] This can compromise diet quality and lead to an increase in obesity[44,45] and/or micronutrient deficiencies.[46,47] There is evidence that the marketing of healthy foods to children has the potential to improve diet quality,[48,49] posing an interesting question namely, how best can healthy foods be marketed to children? In addition to television advertisements, children are also influenced by food packaging and placement, social media, smartphone applications and webpages. Therefore, governments need to decide if healthy foods may be marketed to children and to which specific platforms marketing restrictions should apply. Investment in child health is essential to promote optimal growth and development of children, restricting the marketing of unhealthy foods to children can contribute to better the health of all children in South Africa.

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of the self-regulating EU Pledge programme did not stop them from continuing to market unhealthy foods.[20]

Children's lively interest in food rituals, tastes, and novelty has helped to make child-targeted fast-food advertising so effective. But this interest can be channelled in empowering ways. Moreover, responses can actively enlist children's decision-making, curiosity, independence, and creativity. Viveke Glaser illustrates this in his account of holistic strategies for educating children through their active participation in meal preparation.[21] Pursuing a similar theme, Farber and Laurie show how gardening projects involving children in South Africa can promote children's interest in producing healthy food.[22]

The promotion of enticing and healthy food-growing and preparation in schools, communities or homes could help counter the way that fast-food advertising captures children's imaginations in relation to food. As researchers have shown in a study in Soweto, outdoor advertising in many South African contexts is "obesogenic",[23] and even schools and their environments often actively promote unhealthy foods. Child-centred measures would therefore need to be fully supported by adults, paying concerted attention to the intensity and scope of advertising targeting children.

Avenues for critical public discussion through the print or social media, campaigns by communities or parents' groups, and increasing policy, academic, and media research are further ways of driving public and civic action. Such action would allow legislation and self-regulation to be complemented by the more sustainable strategy of internalising knowledge of healthy food within the broader context of critically confronting the current global food system.

Conclusion

As indicated by the WHO's recommendations over two decades ago, responses to the harmful impact of fast-food advertising on children should be wide-ranging. They would need to curb companies' and marketers' promotion of unhealthy foods through government policies and laws, as well as through self-regulation by industry Interventions should also actively encourage healthy food tastes and interests, especially since marketing has done so much to foster desires for unhealthy foods and social habits around consuming them.

Yet is also important to consider how responses will always be affected by the economic and political power of dominant interest groups and by the availability of resources. The delayed enactment of a law regulating fast-food marketing for children in South Africa speaks volumes about the political influence of the corporate food industry in this country.

Moreover, for many South Africans, healthy food resources are not available or accessible. This inaccessibility, as well as the limited time, means, and support mechanisms for encouraging healthy eating can severely undermine responses to unethical advertising. It is therefore clear that substantive solutions to fast-food advertising need to confront the exploitative nature of the food system as a whole. While fast-food advertising warrants careful critical scrutiny, it must also be connected to the broader economic system that controls how and what people eat.

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Food and nutrition security of the unborn child: The role of maternal nutrition

Elize Symington[a], Shane Norris[b] and Marius Smuts[c]

~ If we change the beginning of the story, we change the whole story. ~

The mother's role in a child's upbringing is all-encompassing. The Nurturing Care Framework recognises the central role of mothers and families in creating an environment in which children can thrive by providing good health, adequate nutrition, responsive caregiving, security and safety, and opportunities for early learning.[1, 2] Yet less emphasis has been placed on the child in the womb. It seems obvious that maternal health and nutrition during pregnancy play an important role in the health of the foetus as complex biological processes and rapid cell differentiation occur during a relatively short period. However, it was only about four decades ago that the extent of adverse foetal exposures on long-term health was highlighted. Barker and colleagues demonstrated that cardiovascular diseases in English and Welsh adults were associated with undernutrition *in utero*.[3] This sparked many retrospective and cohort studies which provided evidence in support of the hypothesis – *Developmental Origins of Health and Disease* (DOHaD).

This chapter explores the impact of maternal health on children's nutritional status, and identifies opportunities to address the double burden of malnutrition in women and children, by examining the following questions:

- How do maternal risk factors impact on their children's nutritional status?
- What is the current status of maternal and child nutrition in South Africa?
- What are the drivers of the double burden of malnutrition?
- What are the recommendations for action?

How do maternal risk factors impact on their children's nutritional status?

Epidemiological studies in natural history cohorts identified that a lower birth weight was associated with an increased risk for glucose intolerance, high cholesterol, and hypertension in adult life.[4] While maternal iron deficiency in pregnancy is associated with neurocognitive deficits in infants,[5] maternal obesity and gestational diabetes[i] increase the risk of their children developing metabolic syndrome and obesity in childhood,[6, 7] as well as obesity and insulin resistance in adulthood.[8]

A child exposed to rapid maternal weight gain during early foetal development, followed by undernutrition postnatally, may be more prone to develop abdominal obesity and non-communicable diseases (NCDs) in later life. Moreover, the offspring of an obese mother might have poor growth and development in early life.[9] These intergenerational effects have been illustrated in Figure 2 in Chapter 1.

Physical and nutritional exposures are not the only risk factors. Women with mental health disorders have an increased risk of delivering small for gestational age babies,[10] and similarly, violence during pregnancy is associated with decreased birth weight and increased rates of prematurity.[11] The adverse effects of tobacco and alcohol use during pregnancy is well known.[12, 13]

There is also growing evidence of the importance of maternal health even before conception. Recent observational studies suggest that micronutrient supplementation both at pre- and periconception may reduce the risk of adverse outcomes.[14]

Optimal preconception care can improve the health and well-being of women, couples, subsequent pregnancies, and ultimately, child health outcomes. Therefore, the health of the biological mother and father[15] have a significant intergenerational impact on their children, and optimal maternal well-being is significantly associated with the health of children.

i Where raised glucose or blood sugar levels are first identified during pregnancy.

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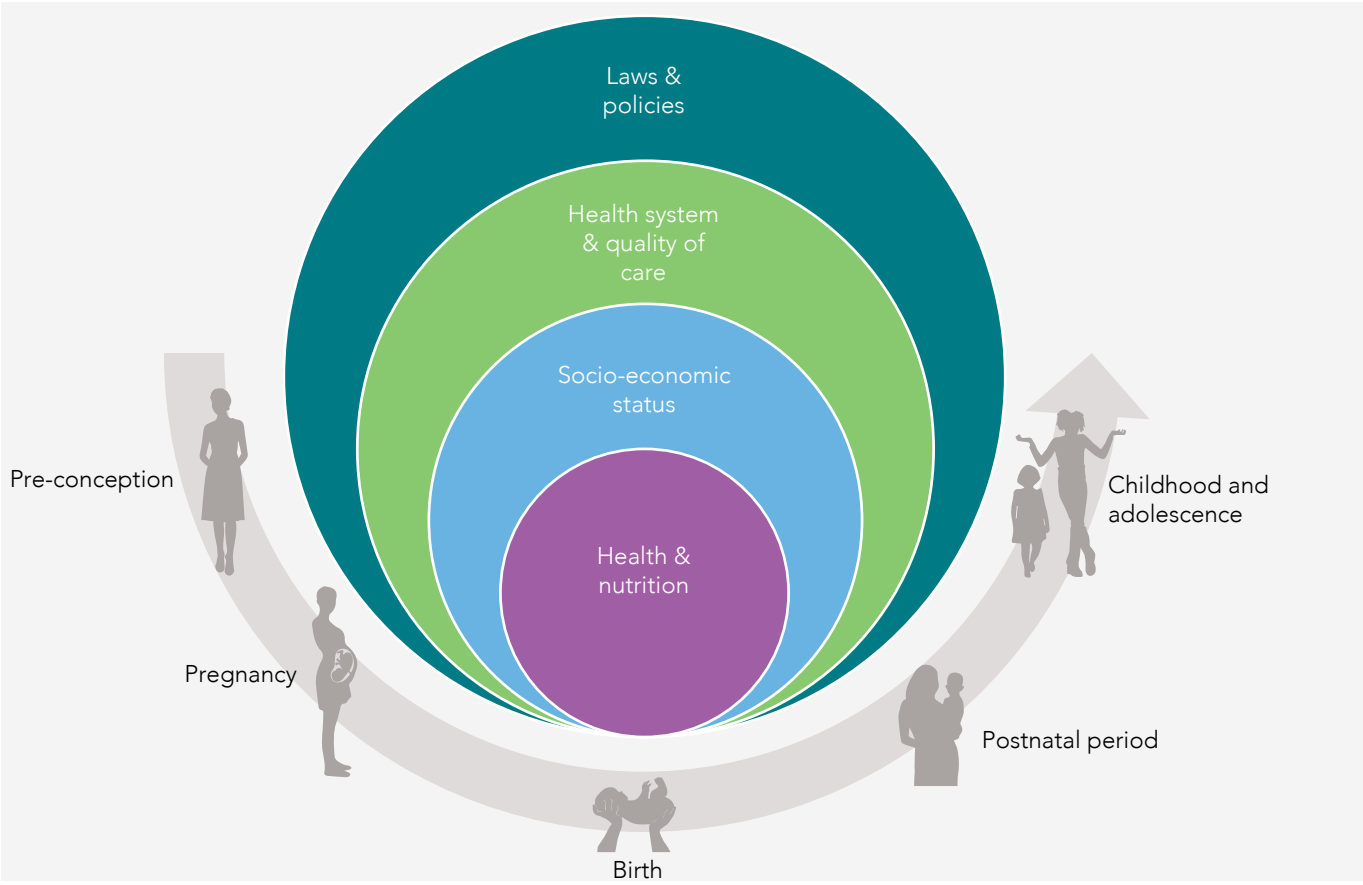
Figure 13: External drivers of maternal morbidity impact on the health and development of their children



Adapted from: Filippi V, Chou D, Barreix M, Say L, Barbour K, Cecatti JG, et al. A new conceptual framework for maternal morbidity. *International Journal of Gynecology and Obstetetrics.* 2018;141:4-9.

From maternal mortality to maternal care

Maternal health was not a topic of research, policy-making and programming until 1985.[16, 17] After a call to global agencies to prioritise maternity care, many programmes and initiatives were implemented to address maternal mortality, including the Millennium Development Goals (MDGs). In the past 20 years, maternal mortality has declined in most parts of the world, including South Africa. However, recent calls for maternal care beyond preventing death have increased.[18] There is a shift in maternal care to ensuring that mothers not only survive but thrive, as outlined in the "Survive, Thrive and Transform" agenda of the Global Strategy for Women's, Children's and Adolescents' Health (2016 – 2030).[19] In 2012, the World Health Organization (WHO) established a Maternal Morbidity Working Group to focus on maternal morbidity and "any health condition attributed to and/or complicating pregnancy and childbirth that has a negative impact on the woman's well-being and/or functioning". One outcome from the working group was the Maternal Morbidity Measurement Framework. The framework identifies several factors that require attention to optimise maternal well-being. This chapter focuses on the external drivers of maternal morbidity (and their children's health) from a nutrition perspective (Figure 13).

These external factors include the woman's economic stability, education, social and community context, health and health care, as well as neighbourhood and environment. These social and environmental determinants of health interact with the woman's reproductive health cycle and influence her risk of becoming pregnant, experiencing illness, and complications during pregnancy and childbirth.[19] The health of women and consequently, that of their children, is affected by this range of external factors which need to be addressed to enable women and their children to thrive.

What is the current status of maternal and child nutrition in South Africa?

South Africa is experiencing a double burden of malnutrition (DBM)[20] where undernutrition (i.e. micronutrient deficiency, underweight, and childhood stunting and wasting) along with overweight, obesity (and the associated diet-related NCDs) co-exist within individuals, households and populations,

throughout life.[21] At household level, DBM is defined as at least one or more members with wasting, stunting or thinness plus one or more members with overweight or obesity within the same household.[20] To further qualify as a household with a DBM, it can occur in one of four ways:

- The child is both stunted and overweight.
- The mother is overweight and one child <5 years has wasting.
- The mother is overweight and one child <5 years is stunted.
- The mother is thin and one child overweight.

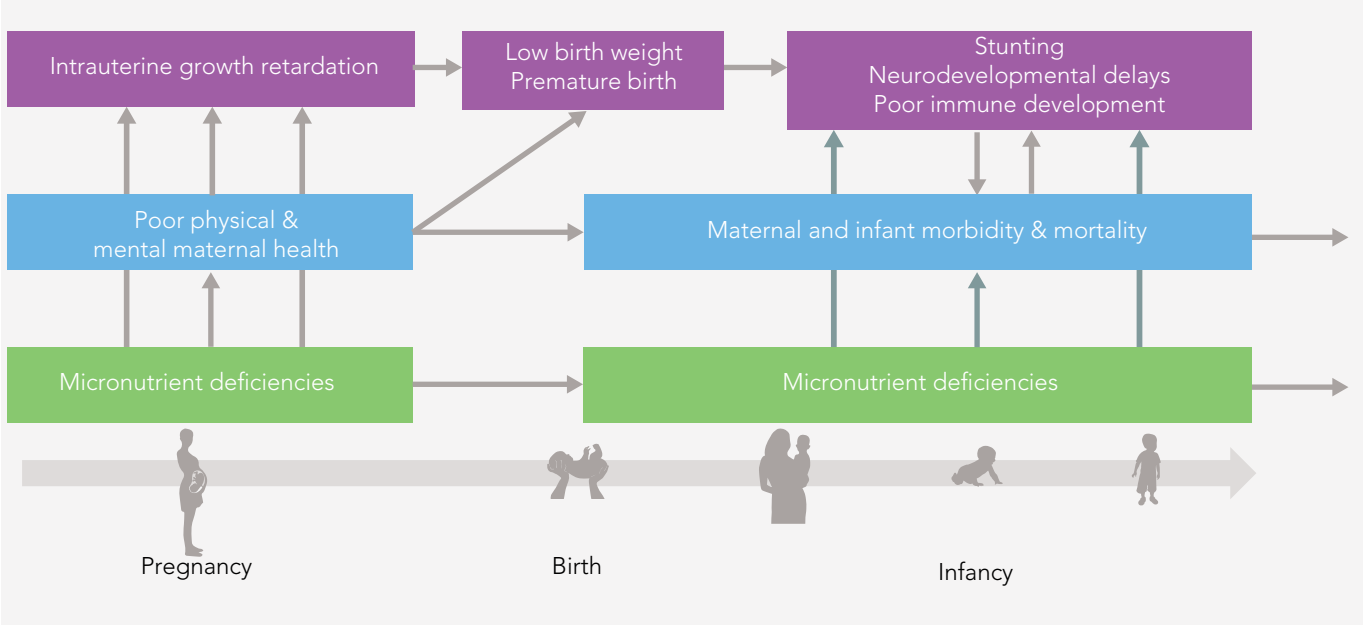
DBM at household level affects most low- and middle-income countries (LMICs) and South Africa is no exception. According to Popkin and colleagues, DBM is especially prevalent in sub-Saharan Africa, south Asia, west Asia and the Pacific.[20] In South Africa, the DBM has been shown in household surveys that indicated that overweight/obese mothers were more likely to have undernourished, specifically stunted, children.[22, 23]

A large body of evidence confirms the effect of maternal malnutrition on foetal development and the health of the child in later years. In this context, the prevalence of the DMB at an individual level, that is in the mother, is a concern. DBM that manifests during the earlier phases in the life cycle (foetal development) is particularly harmful during the sensitive periods or critical windows of development. This is when the expression of the genes and maturation of the microbiome (within the digestive system of the child) is particularly responsive to nutritional influences.[8] All these mechanisms respond to both inadequate and excessive levels of nutritional exposures in early life, which explains how crucial early nutrition and growth are for long-term health and human capital.[24, 25] Figure 14 illustrates the consequences of micronutrient deficiencies in pregnancy.

The double burden of obesity and micronutrient deficiencies in an individual woman of reproductive age may have an even worse effect on the health of her child. The burden on the unborn children of South Africa is therefore of great concern as obesity prevalence among women in South Africa is much higher than the global prevalence of 15%.[26] In 2016, 41% of women in South Africa were obese and 33% were anaemic.[27] Pregnant women are screened according to body mass index (BMI) and mid upper arm circumference during pregnancy but the Guidelines for Maternity Care in South Africa[28] provide no recommendations on nutritional advice to be given according to weight status.

Concerningly, obesity is often associated with poorer micronutrient status.[9, 29] In South Africa, obesity in women of reproductive age (WRA) was associated with iron deficiency.[30] This places an additional risk on the unborn child. Data on the micronutrient status of pregnant women in South Africa is sparse.[31] Between 2005 and 2015, no national or subnational surveys were published on the micronutrient status of apparently healthy pregnant women in South Africa (compared to 8 studies in Ethiopia and 17 in Nigeria).[31] The South African Comparative Risk Assessment group estimated that in 2000, 9 – 12% of South African pregnant women had iron deficiency anaemia, which was estimated to contribute

Figure 14: Consequences of micronutrient deficiencies in pregnancy



Adapted with permission from: Module 1 of the ImpENSA capacity building project. Accessed 30 November 2020 at: www.early-nutrition.org/impensa/

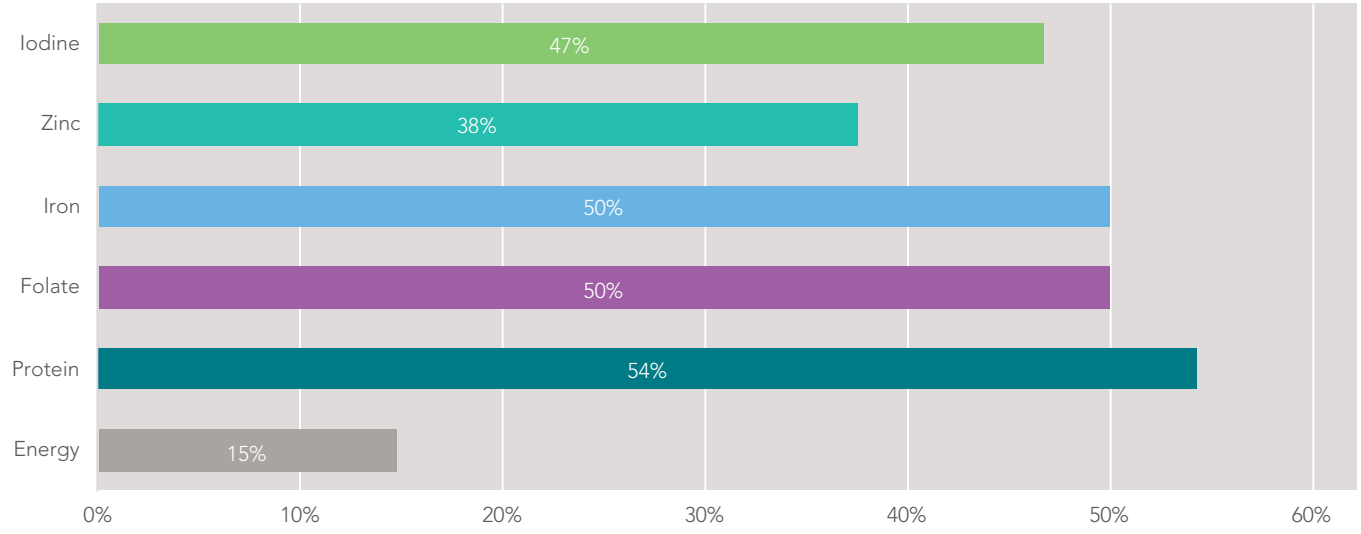
Table 8: National surveys on nutrition indicators for women in South Africa, 1998 – 2016

	SADHS 1998 15+ years	SADHS 2003 15 – 49 years	NFCS 2005 16 – 35 years	SANHANES 2012 16 – 35 years	SADHS 2016 [27] 15 – 49 years
Tobacco use during pregnancy	9% (n=198)	Not reported	Not reported	Not reported	1.6% (n=1,574)
Alcohol consumption during pregnancy	7% (n=191)	1% (n=not reported)	Not reported	Not reported	2.8% (n=1,574)
Anaemia Hb <12 g/dl in WRA Hb <11 g/dl in pregnancy	Not reported	Not reported	29% (n=2,126)	16 – 35 years: 23% (n=1,359)	Pregnant: 39.1% (n=109) 15 – 54 yrs: 32.4% (n=3,211)
Iron deficiency Fer <15 µg/L	Not reported	Not reported	45% (n=1,906)	16 – 35 years: 15% (n=1,223)	Not reported
Underweight	5.6% (n=7,970)	6.2% (n=4,481)	4.6% (n=2,403)	16 – 54 years: 4% (n=4,695)	15 – 54 years 2.9% (n=3,497)
Stunting Height <145cm	Not reported	Not reported	Not reported	Not reported	15 – 54 years 1.7% (n=3,672)
Overweight	26% (n=7,970)	28% (n=4,481)	27% (n=2,403)	16 – 54 years: 25% (n=4,695)	15 – 54 years 25.9% (n=3,497)
Obesity	30% (n=7,970)	27% (n=4,481)	25% (n=2,403)	16 – 54 years: 39% (n=4,695)	38.1% (n=3,497)
Vitamin A deficiency Retinol < 0.70 µmol/L	Not reported	Not reported	27% (n=2,450) (serum vit A <20µg/dL)	16 – 35 years: 13% (n=1,158)	Not reported
Night blindness	Not reported	0.7% (n=1,859)	Not reported	Not reported	≥15 years 12.3% (n=333)
Vitamin A supplementation received	Not reported	34.3% (n=1,859)	Not reported	Not reported	≥15 years 33.7% (n=333)

Notes: WRA: women of reproductive age; SADHS: South Africa Demographic and Health Survey; Hb: haemoglobin; Fer: ferritin; NFCS: National Food Consumption Survey; SANHANES: South African National Health and Nutrition Survey.
Sources: Department of Health, Macro International. South Africa Demographic and Health Survey 1998 [Internet]. Pretoria, South Africa; 2002. Available from: http://dhsprogram.com/pubs/pdf/FR131/FR131.pdf;
Department of Health, Medical Research Council, OrcMacro. South Africa Demographic and Health Survey 2003 [Internet]. Pretoria, South Africa; 2007. Available from: https://dhsprogram.com/publications/publication-FR206-DHS-Final-Reports.cfm;
Labadarios D, Swart R, Maunder E, Kruger H, Gericke G, Kuzwayo P, et al. Executive summary of the National Food Consumption Survey Fortifi cation Baseline (NFCS-FB-I) South Africa, 2005. South African Journal of Clinical Nutrition. 2008;21(3):245–300;
Shisana O, Labadarios D, Rehle T, Simbayi L, Zuma K, Dhansay A, et al. South African National Health and Nutrition Examination Survey, 2012 (SANHANES-1) [Internet]. 2nd ed. Cape Town: HSRC Press; 2014. Available from: http://www.hsrc.ac.za/en/research-data/view/6493; National Department of Health (NDoH), Statistics South Africa (StatsSA), South African Medical Research Council (SAMRC), ICF. South Africa Demographic and Health Survey 2016. Pretoria, South Africa and Rockville, Maryland, USA; 2019; .

to 7% of perinatal deaths and 5% of maternal deaths.[32] More recent regional studies indicate no improvement in the prevalence of iron deficiency anaemia among pregnant women. This is despite the routine high-dose iron supplements that are provided (60mg elemental iron)[28, 33] and the mandatory fortification of staples (maize meal and bread flour) which has been in place since 2003 (with eight vitamins and minerals including iron and folic acid).[34] In addition to iron supplementation, pregnant women receive high dose folic acid (5mg) and 1,000mg calcium daily during pregnancy. Even though South Africa has successfully implemented the salt iodisation policy, iodine deficiency among pregnant women in Limpopo is high (45%). Since there is limited data on pregnant women, studies on WRA are used as a proxy for the deficiency burden in pregnant women (Table 8).

Figure 15: Percentage increase in energy, protein and micronutrient requirements in the third trimester of pregnancy



Source: National Academy of Sciences. Dietary Reference Intakes (DRIs): Recommended Dietary Allowances and Adequate Intakes, total water and macronutrients. 2011. Available from: https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t4/?report=objectonly;
National Academy of Sciences. *Dietary Reference Intakes (DRIs): Recommended Dietary Allowances and Adequate Intakes, elements*. 2019. Available from: https://www.ncbi.nlm.nih.gov/books/NBK545442/table/appJ_tab3/?report=objectonly;
National Academy of Sciences. *Dietary Reference Intakes (DRIs): Recommended Dietary Allowances and Adequate Intakes, vitamins*. 2011. Available from: https://www.ncbi.nlm.nih.gov/books/NBK56068/table/summarytables.t2/?report=objectonly
Analysis by Elize Symington.

A 2017 review of micronutrient status among WRA indicates that 23% were anaemic, 16% iron deficient and 10% had iron deficiency anaemia;[ii] 22% were vitamin A deficient and 20% iodine deficient.[31] It is important to note that nutritional requirements increase during pregnancy, especially from the second trimester. When compared to pre-pregnancy requirements, energy needs only increase 11 – 15%, while the micronutrient and protein requirements increase up to 54% (Figure 15). Therefore, the emphasis on the inclusion of nutrient-dense foods and dietary diversity becomes essential to meet these micronutrient requirements without providing excessive energy.

The health effects of the DBM include an increased risk for NCDs.[38] In South Africa, NCDs are among the top causes of death, accounting for 44% of deaths in WRA in 2013.[39] NCDs are major causes of death and disability globally,[40] killing 41 million people each year (and accounting for 71% of deaths).[41] While previously more common in high-income western countries (HICs), the prevalence of NCDs is rapidly increasing in LMICs.[42, 43] From 1980 to 2014, the prevalence of diabetes remained mostly unchanged in western Europe but doubled in sub-Saharan Africa, India and China to levels that are now higher than in HICs.[40] Death rates from cardiovascular disease in many LMICs now also exceed those in HICs.[44] NCDs are occurring at younger ages and more aggressively in LMICs,[40] and are creating crippling economic, societal, and personal costs, with worse to come.

Policies, guidelines, and strategies

South Africa has several policies, guidelines and strategies in place to improve the nutritional status of the general population (including WRA) as well as pregnant women by addressing overweight and micronutrient deficiencies (see Table 2 for a summary). These interventions have tended to be fragmented and greater efforts are needed to ensure an integrated approach to the DBM across the life course. This includes a better understanding of the causes or drivers of the DBM.

What are the drivers of the double burden of malnutrition?

Many LMICs have experienced a nutrition transition due to urbanisation, income growth, expansion of the global food industry and change in household dynamics (women working outside of the home).[20] This transition has been accompanied by an increase in access to and consumption of ultra-processed foods rich in refined carbohydrates (including sugar), fat, salt and additives,[45, 46] also referred to

ii Anaemia is measured by haemoglobin status: <12 g/dL for WRA. Iron deficiency is measured by iron stores, i.e. serum ferritin: <15 ng/dL. In iron deficiency anaemia, both haemoglobin and ferritin are low.

Table 9: Summary of South African policies, guidelines and strategies addressing obesity and/or micronutrient deficiency in women of reproductive age and/or pregnant women

Document	Years of implementation	General public (incl. WRA)	PW	Obesity	Micronutrients
National Guidelines on Nutrition Counselling, Support, and Treatment for Malnourished Individuals	2015 ongoing	Yes	Yes	Yes	Yes
Food-based Dietary Guidelines	2012 ongoing	Yes	Yes	Yes	Yes
South African Food Guide	2012 ongoing	Yes	Yes	Yes	Yes
Regulations relating to the Fortification of Certain Foodstuffs	2003 ongoing	Yes	Yes	No	Yes
Regulations relating to the Mandatory Iodisation of Salt	1995 ongoing	Yes	Yes	No	Yes
Roadmap for Nutrition in South Africa	2013 – 2017	Yes	Yes	Yes	Yes
Basic Antenatal Care (BANC) Handbook	2007 ongoing	n/a	Yes	No	Yes
Standard Treatment Guidelines and Essential Medicines List for South Africa	2018 ongoing	Yes	Yes	Yes	Yes
Roadmap for the Provision of a Maternal and Child Health Package of Care for the First 1,000 Days	Draft	Yes	Yes	Yes	Yes
Guidelines for Maternity Care South Africa	2016 ongoing	n/a	Yes	Yes	Yes
Adult Primary Care Guide	2016/2017	Yes	Yes	Yes	Yes
Health Promotion Policy and Plan	2015 – 2019	Yes	Yes	Yes	No
Strategy for the prevention and control of obesity in South Africa	2015 – 2020	Yes	Yes	Yes	No
National Strategic Plan for the Prevention and Control of Non-communicable Diseases	2020 – 2025	Yes	No	Yes	No
Strategic plan for Maternal, Newborn, Child and Women's Health and Nutrition in South Africa	2012 – 2016	n/a	Yes	No	Yes

WRA: women of reproductive age; PW: pregnant women
Dark grey blocks indicate missed opportunities to address nutrition-specific matters

as obesogenic food environments. Ultra-processed foods are often more affordable, accessible and convenient than healthier foods,[45] which results in limited healthy options for those living in poverty. More than a quarter of South Africans live below the food poverty line.[47] Many women are unemployed (39%) and are not living in a union (married or living with a partner) (64%), which further contributes to the poverty of pregnant women.[27] Poverty is closely associated with food insecurity. Approximately 20% of South African households had inadequate access to food in 2017.[47] These conditions worsen in unstable situations such as with the national lockdown during the COVID-19 pandemic.[48]

While South Africa is battling household food insecurity, increased access and utilisation of processed food[49] and an increasing trend in sales of fast and processed food and sugar-sweetened beverages is evident.[20, 50, 51] High intakes of processed food are associated with obesity in Africa,[52] and ultra-processed foods are associated with cardiovascular disease and all-cause mortality in Europe.[46, 53] Apart from the physiological effect of insufficient food, eating ultra-processed foods has psychological effects too and impacts on the overall well-being of individuals.[54] Food insufficiency among pregnant women in Cape Town was associated with depressive symptoms.[55] Depressive disorders are among the most debilitating disorders worldwide and adversely affect the overall well-being of women (pre- and postnatally), compromising their capacity to care for their children and provide nurturing environments. In addition to changing food environments and high levels of food insecurity, South African women's food choices are affected by cultural beliefs. For example, pregnant women in the Eastern Cape reported avoiding nutrient-dense foods such as meat products, fish,

Case 8: Exclusive breastfeeding intentions and food insecurity of pregnant women

Freda Philander, Institute for Social Development, University of the Western Cape

Food security is imperative during the antenatal period as the physical and neurological development of the child takes place in-utero.[66] A nutritious diet during pregnancy contributes to children having a higher birth weight and a better chance of a healthy life.[67] Yet mothers in low-income households often struggle to purchase adequate nutritious food. Similarly, research indicates that decisions to exclusive breastfeed are made during the antenatal period, and these intentions predict exclusive breastfeeding outcomes.[68]

This case reports on the findings of a cross-sectional research study using self-administered closed-ended questionairres to determine the influence of household food insecurity on the exclusive breastfeeding intentions of 530 women attending an antenatal clinic in Delft, Western Cape. Seventy-two percent of the women expressed anxiety and stress due to the uncertainty of their households' food supply. Only 3% of the women's households were considered to be food secure, with 7% being mildly food insecure, 11% being moderately food insecure, and a staggering 80% being severely food insecure. Two thirds of women (66%) described living in households without sufficient quality of food, with 56% having an insufficient quantity of food. Half of the women (52%) were unemployed. This was significantly higher than the official unemployment rate of 19% or the expanded unemployment rate of 23% for the Western Cape.[69] The proportion of women having no income in this study (32%) was much higher than in the broader Delft population (17%).[70] The Child Support Grant was the only source of income for 14% of the pregnant women and they received grants for only 27% of their prior children.

Pregnant women who experience adversity such as food insecurity and stressful life events are more likely to experience mental distress that may extend into the postnatal period and impact on their capacity to care for their newborn child.[71] In addition, pregnant adolescents are more at risk than adult pregnant women to common mental disorders such as depression and anxiety.[72]

Those women who had no or limited income were 20% more likely to experience household food insecurity (aOR=0.2; Pr=0.03). However, access to the CSG had a protective effect and was associated with a five-fold increase in food security (aOR=5.5; Pr=0.00).

Seventy-three percent of the women expressed their intention to exclusively breastfeed. Reasons given included that breastmilk is healthy for the baby (34%); it is affordable (9%), and concerns about their HIV-status (1%). The primary reason given by the remaining 27% of pregnant women who did not intend to practice exclusive breastfeeding, was their need to return to work or to seek work. As reported by Witten et. al. (2020), the majority of women (72%) in this study also believed it was important for mothers to consume adequate and nutritional food in order to practice exclusive breastfeeding.[73]

While the majority of women expressed an intention to practice exclusive breastfeeding, household food insecurity may undermine pregnant women's decision to exclusively breastfeed as the Pearson's chi-squared test confirms a statistically significant association between household food insecurity and exclusive breastfeeding intention.

This study confirms the importance of household food security for pregnant women. The CSG is one of South Africa's largest social protection programmes to improve household food security. Yet, the primary caregiver can only apply for the CSG once the child has been born. *This study recommends that the Department of Social Development extend the CSG to pregnant women to improve household food security and nutrition outcomes.*

Women in low-income communities or no-income communities do not have finances to visit the South African Social Security Agency offices to apply for CSG. *The study recommends that the services provided by the mobile office for the registration of newborns at the clinics be extended to enable mothers who qualify to apply for the CSG.*

Pregnant women also experienced a lack of access to affordable and nutrient-rich food. Having little to no income makes it more challenging for these pregnant women to acquire much-needed food. *The study recommends that community-based non-profit organisations should provide nutritious meals to pregnant women to improve the nutritional health of both the mother and the unborn child. The necessary funding for the NPOs should be provided by the Department of Social Development.*

Food insecurity was one of the factors undermining women's intentions to exclusively breastfeed Providing income during the antenatal period will increase women's ability to purchase nutritious food at a critical point in children's development. This will not only improve maternal nutrition and foetal development, but also support women's intention to exclusively breastfeed as women still connect what they eat to the quality of their breastmilk.

Table 10: Summary of ten priority candidates for double-duty actions

Health systems	1. Scale up new WHO antenatal care recommendations 2. Scale up programmes to protect, promote, and support breastfeeding 3. Redesign guidance for complementary feeding practices and related indicators 4. Redesign existing growth monitoring programmes 5. Prevent undue harm from energy-dense and micronutrient-fortified foods and ready to use supplements
Societal safety nets	6. Redesign cash and food transfers, subsidies, and vouchers
Educational settings	7. Redesign school feeding programmes and devise new nutritional guidelines for food in and around educational institutions
Agriculture, food systems, and food environments	8. Scale up nutrition-sensitive agriculture programmes 9. Design new agricultural and food system policies to support healthy diets 10. Implement policies to improve food environments from the perspective of malnutrition in all its forms

Adapted from: Hawkes C, Ruel MT, Salm L, Sinclair B, Branca F. Double-duty actions: Seizing programme and policy opportunities to address malnutrition in all its forms. *Lancet*. 2020;395(10218):142-55.

potatoes, fruits, beans, eggs, butternut and pumpkin for cultural concerns about the effect on pregnancy outcome.[56]

Even though the mechanisms are not well understood, it is evident that replacing nutrient-rich foods with energy-dense foods is an emerging contributor to stunting[53, 57, 58] and that the first 1,000 days[iii] of life is a particularly sensitive period of development.[20] The DBM may also affect the health of both mother and child during childbirth. For example, an overweight mother of short stature who never reached her full height potential may have a smaller pelvis (leading to birth complications) and an increased risk of delivering a high birth weight baby or developing gestational diabetes.[59] It is due to this complex array of drivers – from food environments to social beliefs – that there is a call for comprehensive actions to address the health of women and their children. These comprehensive actions are also referred to as double-duty actions.

What are the recommendations for action?

The best window of opportunity for interventions to prevent and mitigate the DBM includes the continuum of the early life cycle: preconception, pregnancy, as well as early infancy.[8]

A call for double-duty actions

In the Lancet Series on DBM, Hawkes and colleagues explain how double-duty actions can strengthen the potential to reduce undernutrition, overweight, and diet-related NCDs.[60] A holistic approach to addressing malnutrition in all its forms is necessary as very often different forms of malnutrition are managed by separate policies, programmes, governance structures, and funding streams. As has become evident from the preceding discussions, undernutrition, obesity, and diet-related NCDs are intrinsically linked through early-life nutrition, dietary diversity, food environments, and socioeconomic factors. Therefore, double actions are needed to reduce the risk of NCD development. This is reflected in Target 2.2 of the SDGs which aims to "end all forms of malnutrition".[61] Therefore, the sooner siloed approaches in efforts to tackle malnutrition in all its forms are replaced by double-duty actions, the better off the next generation will be. Using the same platforms for shared actions to address the co-existence of both undernutrition, obesity, and diet-related NCDs is more sustainable and cost-effective. Hawkes and colleagues proposed ten strong candidates for double-duty actions across different sectors, including health services, social safety nets, educational settings, agriculture, food systems and food environments.[60] This framework has been adapted and summarised in Table 3.

However, there are very few life-course double-duty interventions that start at preconception to impact health outcomes in the child. Such interventions are essential to provide both a better understanding and an evidence base to optimise preconception health and break intergenerational trajectories of ill-health or NCDs. One such example is the Healthy Life Trajectories Initiative in Case 10. Comprehensive approaches are most probably the only solution to this multi-faceted problem and will require societal shifts in the way nutrition and public health are approached.

In South Africa, we propose a double-duty strategy with a focus on the following three elements:

- **Preconception care: Optimising women's health and nutrition:** The Lancet series on preconception health concluded that optimising preconception health could have a significant benefit for the future health of women and the prevention of intergenerational health risks. Observational evidence from several countries around

iii First 1,000 days of life: the period spanning from conception to the age of 2 years.

the world supports the conclusion that interventions that support women to optimise their health (including micronutrient status and managing their weight even before they become pregnant) may combat intergenerational obesity and NCD-risk. Since preconception clinics do not exist, the opportunities at family planning, diabetic and HIV/TB clinics should be optimised. Dietary counselling and nutritional advice should be built in as part of these services to make every contact count. This should include counselling on optimising body weight and micronutrient status within this health setting. There is motivation for the preconception micronutrient supplementation since most interventions only start after confirmation of pregnancy, in the late first trimester or even in the second trimester, and therefore miss the important processes of epigenetic change peri-conception and during early pregnancy. Additional opportunities to address preconception health are at school level. This is an early intervention to optimise the nutritional health of young women as well as the potential young fathers. Teachers should receive direct training guided by nutrition professionals and their respective bodies.

- **Perinatal care: Multifaceted interventions to address suboptimal maternal nutrition and health:** Nutrition counselling should be prioritised within ANC visits. Support for appropriate weight gain is important. Guidelines on how to address identified BMI categories should be provided in maternity care guidelines. These may include referral to a dietitian or specific dietary counselling guidelines such as portion control, nutrient density,

Case 9: Food insecurity, domestic violence and common mental disorders

Zulfa Abrahams[i]

Like many low- and middle-income countries, South Africa has a high prevalence of common mental disorders (CMDs) such as depression and anxiety during the perinatal period. It is estimated that one in every three perinatal women develop symptoms of depression,[74-77] while one in every four develop symptoms of anxiety[75,78]. Several psychosocial risk factors have been linked to the development of CMDs, including food insecurity and domestic abuse.[74, 79]

Prior to the coronavirus outbreak, more than half of all South Africans lived below the upper-bound poverty line (R1,227 per person per month),[80] in overcrowded homes with extended family members. In April and May 2020, when all non-essential services were halted during the COVID-19 lockdown, Statistics South Africa reported that the proportion of South Africans experiencing hunger increased from 4% to 7%.[81] The lockdown had the greatest impact on vulnerable groups – i.e. those who were low-skilled and less educated – as it increased the already high levels of unemployment and food insecurity.[82]

Pregnancy is a particularly vulnerable period, further marginalising already vulnerable women by reducing their income-generating potential and introducing new financial needs, such as having to improve their diet and attend regular clinic visits. In a survey of perinatal women attending public healthcare facilities across Cape Town, more than half the women reported being unemployed, 80% reported experiencing varying levels of food insecurity and 15% reported experiencing domestic abuse during the lockdown.[83] It is therefore not surprising that the proportion of perinatal women experiencing psychological distress increased from 3% prior to the lockdown to 26% during the lockdown, and that experiencing food insecurity or domestic violence significantly increased the risk of CMDs.[83]

The relationship between perinatal CMDs, poverty and food insecurity is multifaceted with several social issues interacting.[84,85] Poverty leads to food insecurity, which impacts the mental and physical well-being of the mother, and is detrimental to the care and well-being of her children.[86] Food insecurity and depression, experienced during the perinatal period, is associated with several adverse birth outcomes, including pre-term birth, low birth-weight and intra-uterine growth restriction.[87] Postpartum, it affects infant stunting as a result of early cessation of breastfeeding and insecure infant-mother attachments.[88]

It is therefore quite clear that alleviating food insecurity and providing mental health support during the perinatal period is of paramount importance for improving the physical and mental well-being of mothers, neonates, infants and young children. This can be achieved by starting the Child Support Grant during pregnancy and providing routine detection, referral and counselling services to perinatal women attending public healthcare facilities across South Africa.

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Case 10: The Healthy Life Trajectories Initiative

The Healthy Life Trajectories Initiative (HeLTI) is an initiative of the WHO and a group of funders to address the increasing burden of NCDs around the world (see: https://helti-net.org). HeLTI draws on the Developmental Origins of Health and Disease approach. The initiative recognises how environmental factors interact with genes during conception, foetal life, infancy and early childhood in ways that affect the individual's health later in life. This four-country investigation is testing a multi-faceted and integrated health and nutrition intervention that starts at preconception and continues across the life course (pregnancy, infancy and childhood). The aim is to optimise the nutritional status of undernourished women before, during and after pregnancy. This includes support to overweight or obese women to achieve a more optimal body weight and/or metabolic fitness prior to pregnancy. HeLTI should shed light on whether these interventions help improve maternal health and reduce the intergenerational risk of childhood obesity in the next generation.

The HeLTI research platform

The HeLTI programme comprises four randomised control trials in Shanghai (China), Mysore (India), Soweto (South Africa) and two provinces in Canada. Each trial is independently powered but harmonised to enable pooling of data of more than 22,000 women and more than 10,000 pregnancies. After extensive formative work, these randomised control trials are underway in China and South Africa, with India and Canada due to start in 2021. The four populations are at different points in the nutrition transition: Canadian and Shanghai are well advanced, Soweto is relatively deprived and undergoing rapid urban transition, and in rural Mysore, the transition is just beginning. A high prevalence of suboptimal nutrition characterises all sites. In India, calorie, protein and micronutrient deficiencies are frequent in pregnancy, while in Canada, China and South Africa, women often have an excessive calorie intake but also suffer from micronutrient deficiencies. To optimise nutritional status the intervention package includes nutritional counselling (with specific aims to address nutrient-density and dietary diversity); multiple micronutrient supplementation; improved social support through community health workers/nurses trained in healthy conversation skills; and motivation to improve physical activity, quality of sleep and screen time.

HeLTI outcomes: The final outcomes of the studies will evaluate the overall impact on children's nutrition and development at age five, including overweight and obesity, glucose concentration, blood pressure and neurodevelopment. A comprehensive series of measures to track maternal and child health and development including the collection of biospecimens will enable studies into the science and mechanisms of the intergenerational effect. The studies will also track a host of intermediate and process outcomes, as well as the efficacy and acceptability of the intervention package, compared with standard care.

and dietary diversity. Since micronutrient requirements increase proportionately more than energy requirements during pregnancy (Figure 3), counselling should emphasise nutrient density. Because previous single intervention trials on multiple micronutrient supplementation (MMS) have shown only modest benefits for pregnancy and child outcomes, recent work included a systematic review[62] and meta-analyses.[63, 64] These studies indicated that MMS (with more than four micronutrient components) resulted in improvements in stillbirths, small-for-gestational age and low birth weight babies when compared to iron and folic acid supplementation. Therefore, the 2020 WHO antenatal care recommendations on nutritional interventions were updated and state that "antenatal multiple micronutrient supplements that include iron and folic acid are recommended in the context of rigorous research".[65] South African guidelines should be updated according to international recommendations.

- **Behaviour change interventions:** In addition to micronutrient supplementation and fortification, population behaviour change interventions (including social grants) could be an effective method for preventing NCDs. A dual strategy should target specific groups that are actively planning a pregnancy, while improving the health of the broader population. Modern marketing techniques could be used to promote a social movement based on an emotional and symbolic connection between improved preconception, maternal health and nutrition, and offspring health. Political theory supports the development of an advocacy coalition of groups interested in preconception health, to harness the political will and leadership necessary to turn high-level policy into effective coordinated action.

Conclusion

Even though maternal mortality in South Africa has declined in the past few years, maternal well-being is of concern. The determinants and drivers contributing to the double burden of obesity and micronutrient deficiencies in pregnant women are extensive and require double-duty actions to mitigate and prevent poor intergenerational health and nutrition outcomes. A shift beyond maternal survival to optimal well-being is recommended. This will require change in the ways that healthcare services are delivered. The entire health and nutrition community needs to take ownership of such a novel approach and adopt a mindset that involves a more holistic approach to address the whole spectrum of malnutrition-related problems. Double-duty interventions are not only cost-effective but also more efficient and effective than single-duty interventions.[38]

Case 11: The discontinuation of multiple micronutrient supplements in the public health care system: The experience of KwaZulu-Natal

Lenore Spies[i]

The national health policy recommends the use of iron and folic acid (IFA) supplements to address iron-deficiency anaemia in pregnant women.[89] Yet, between 2010 and 2016, the Kwazulu-Natal Department of Health introduced a policy to provide all pregnant and breastfeeding women with a broader package of multiple micronutrient supplements (MMS) in response to the deteriorating nutrition status and immunity of clients awaiting antiretroviral therapy (ART) as well as the high levels of poverty and food insecurity in the province.[90]

In 2016, South Africa's HIV policy shifted from initiating ART based on a person's CD4 count to 'test and treat' and the provision of ART to all HIV-positive patients regardless of their CD4 count. Routine MMS was therefore discontinued based on the assumption that HIV treatment would improve women's nutritional status. And, in the absence of a national policy aligned to emerging global recommendations, the province was advised to revert to the use of IFA for pregnant women.

Particular enablers of the KZN policy directive were:

- adequate funding from both the provincial equitable share budget and the HIV/communicable diseases national conditional grant;
- a well-developed district health care system with an existing medicine procurement and distribution system that was easily able to accommodate a small delivery and storage item (MMS) within its routine systems;
- the availability of MMS on the national RT9 tender which facilitated ease of procurement;
- MMS were manufactured in-country which facilitated deliveries and reduced stockouts; and
- the review of the national infant and young child feeding guidelines, and the maternal and neonatal health guidelines, which facilitated internal discussion and consultations in order to contribute to the policy agenda.

Particular barriers that resulted in the termination of the policy directive were:

- the removal of MMS from the essential medicines list;
- the lack of international and national policy guidelines on the use of MMS in pregnant women;
- the discontinued use of MMS in the 'test and treat' HIV policy; and
- limited capacity to advocate for the continued use of MMS in the context of competing priorities.

In 2020, the World Health Organization[91] updated its antenatal care guidelines recommending the use of MMS to address multiple micronutrient deficiencies in pregnancy (especially iron deficiency anaemia), given that the dietary intake of fruit, vegetables, meat and dairy products of many pregnant women living in resource-poor contexts is often insufficient to meet increased maternal and foetal dietary needs.

Given the expected impact of the COVID-19 pandemic and the subsequent economic crisis, it would be in the interest of maternal and child health for South Africa to align its maternal and child nutrition policies and programmes to include the use and distribution of MMS. This will require decisive leadership and coordination across a hierarchy of sectors and committees to put policies in place to address the barriers listed above, and to enable implementation.

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Food and nutrition security of infants and young children: Breastfeeding and complementary feeding

Nazeeia Sayed,[i] Sara Jewett[ii] & Lynette Daniels[iii]

Breastfeeding an infant exclusively for six months,[iv] with the gradual introduction of nutrient dense foods[v] from six months until the child transitions to the family diet, are recommended as key interventions for better food and nutrition security for infants and young children.[1] Breastmilk continues to be an important contributor to nutrition after six months, but other foods are then needed to meet the growing infant's nutrient needs. The phase that follows exclusive breastfeeding when foods are introduced to the infants' diet is known as the complementary feeding phase.

This chapter examines the current status of infant and young child feeding in South Africa and identifies opportunities for intervention, by responding to the following questions:

- What is the current infant and young child feeding situation in South Africa?
- What kind of support is needed to ensure optimal feeding practices?
- What can be done at the level of the individual mother and child?
- How can we support infant and young child feeding in different settings?
- How can we address the societal drivers of infant and young child feeding practices?

What is the current infant and young child feeding situation in South Africa?

Infant and young child feeding (IYCF) in South Africa is far from optimal as outlined in Table 1. According to the 2016 South African Demographic and Health Survey (SADHS),[2] only 32% of infants younger than six months were exclusively breastfed. In addition to low exclusive breastfeeding rates, complementary foods were often introduced too early (before six months of age), and complementary feeding diets were characterised by poor dietary diversity (meaning there is little variety in the diet).[3] Only 16% of 6 – 8-month-olds and 16% of 9 – 11-month-olds met the criteria for a minimally acceptable diet[2] (this is a composite indicator of dietary variety and meal frequency), and foods of minimal nutritional value were also given to infants (such as salty snacks).[3]

This is a concerning situation as nutrition during the first 1,000 days of life, from conception, through pregnancy, and during the first two years of life, provides a unique opportunity for building healthier and more prosperous futures. Poor nutrition in the first 1,000 days disadvantages a child from growing and developing optimally, and from thriving and learning well at school. It increases their risk for chronic disease later in life.[4, 5] Making investments to ensure that infants and young children are provided with optimal nutrition in their early years is a wise decision that has long-term pay-offs.

Malnutrition is, however, often intergenerational where children are disenfranchised even before they are born as a result of dietary inadequacies in the first 1,000 days of life[6], a concept referred to as slow violence to malnutrition.[7] The length-for-age of an infant is used to define stunting. Infants are classified as stunted if their length-for-age is lower than a reference standard on the growth curve, an indication of chronic undernutrition. The 2016 SADHS[2] reported that 32% of infants below the age of six months were stunted compared to 27% of children under five years old. Furthermore, it also highlighted an increase in stunting from 8 to 23 months of

Table 11: Current status of infant and young child feeding in South Africa

- High breastfeeding initiation rates
- Low rates of exclusive breastfeeding to six months
- Early introduction of complementary foods (before six months)
- Poor dietary diversity in infants and young children diets
- Foods of minimal nutritional value are provided
- Many infants do not meet the criteria for minimally acceptable diets

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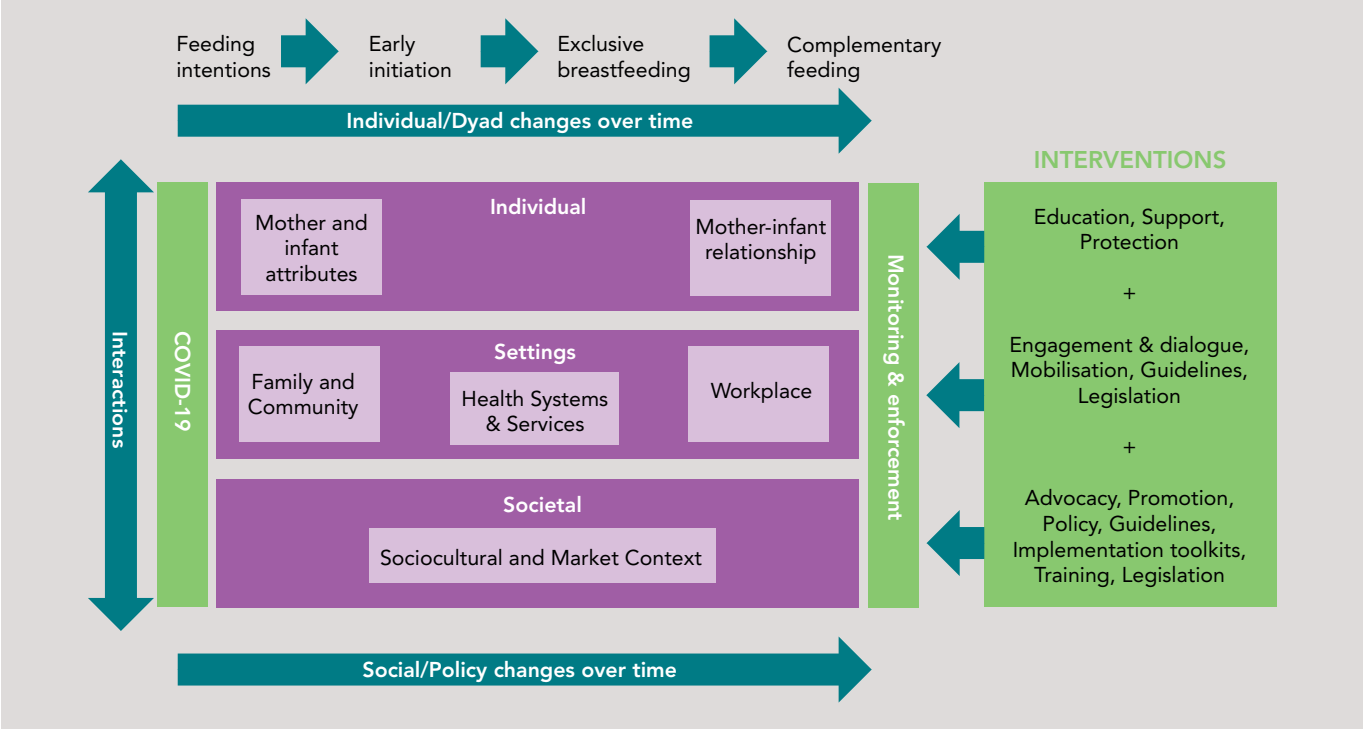
iv This means the infant receives only breast milk (no water, other liquids or any other foods).
v Infants have a small stomach but high energy and nutrient needs for growth and development.

Figure 16: Determinants of infant food and nutrition security



Adapted from: Rollins NC, Bhandari N, Hajeebhoy N, Horton S, Lutter CK, Martines JC, Piwoz EG, Richter LM, Victora CG & TLBS Group (2016) Why invest, and what it will take to improve breastfeeding practices? *The Lancet*, 387(10017): 491–504. doi:10.1016/S0140-6736(15)01044-2.

age, which coincides with the complementary feeding phase.

What kind of support is needed to improve the situation?

To improve the food and nutrition security of infants and young children in South Africa, we need to ensure that more mothers initiate breastfeeding, breastfeed exclusively for six months, introduce nutrient dense complementary foods at the age of six months, and continue breastfeeding to two years and beyond. To achieve these desired outcomes requires support at all levels of society: government, the health system, community, family and workplaces. The nature of support differs depending on the stage of a child's development. As shown in Figure 16, the food and nutrition security for children is shaped by determinants at the individual level of the mother and infant; in various settings, such as the family and community, workplace, health system and services; and at the societal level – where socio-cultural norms, market practices and the broader economic situation affect the broader food environment. Different types of interventions are required to alter dynamics at each of these levels.

Apart from poor breastfeeding and complementary feeding practices, infections and illness can also contribute to poor infant growth and development. Therefore, efforts to reduce infections such as clean water, hygiene and sanitation, deworming, vitamin A supplementation and immunisation are also needed to optimise health, growth and development (see Case 5 on WASH and infant nutrition by Doug Momberg).

This chapter describes infant and young child food and nutrition security using a multi-level lens. Some of the barriers, facilitators and opportunities, at the individual, settings and societal levels will be discussed in the South African context. The COVID-19 pandemic's influence on the food environment of the infant and young child is also explored.

Acknowledgement is given to issues of equity and resource limitations that could impact on the various determinants of food and nutrition security of the infant and young child, but these issues are beyond the scope of this chapter. The individual, settings and societal level elements from Figure 1 are used to structure the discussion that follows. Interventions described in Figure 1 are topline, but more specific recommendations are made in each section of this chapter. The Figure also indicates changes over time, interactions between the various elements, and monitoring and evaluation. These are all important features that need to be acknowledged when considering the various levels impacting on IYCF, but these are not addressed in this chapter.

What can be done at the level of the individual mother and child?

There are a myriad of individual level factors that could impact on infant feeding. With only 34% of women employed in South Africa, and 43% of households being female-headed[2], the stress of unemployment and lack of support (financial, emotional, etc.) from a partner affects both the mother and infant.

The behaviour of caregivers, their knowledge, their beliefs and the influence exerted on them by others are important considerations in the set of food system-related drivers that impact on infant feeding.[8] A lot of communication around infant feeding has targeted mothers. This communication is often delivered in health facilities, although mobile platforms like MomConnect are emerging as new channels.[9] However, the idea that all caregivers are singularly driven by health motivations and that they have the power to act on information like "breast is best" is not supported. Evidence suggests that such communication is not sufficient for most mothers to act, as they face social and structural barriers.[10]

A mother's HIV status has also been consistently associated with different feeding choices in South Africa. Prior to the Tshwane Declaration, which ended government provision of free formula to HIV exposed infants, many mothers living with HIV may have opted for formula to reduce risks of vertical transmission. However, recent evidence shows that HIV positive mothers are more likely to exclusively breastfeed for longer than non-infected mothers, motivated by the same desire to protect their infants.[11]

Maternal depression also impacts infant feeding. A 2018 review highlighted that maternal depression can delay breastfeeding initiation, contribute to breastfeeding cessation, and lead to the early introduction of food, and introduction of other commercial milks.[12] Potential harmful practices, such as unhygienic feeding practices, the inability to recognise satiety cues, and the addition of cereal to bottles (possibly to encourage infants to sleep longer), may be increased in depressed mothers.[12]

Food insecurity is related to depression and affects both parenting practices and infant feeding decisions.[13] Adult and child hunger in South Africa appear to be declining since the start of the COVID-19 lockdown but remain higher than pre-COVID-19 levels.[14] Adult hunger is higher than child hunger levels, which may indicate that children are protected to some extent by adults in the household. A multi-country study that included a large sample size (n = 149 countries) with varying individual incomes found that as individual-level food insecurity worsened, mental health declined.[15]

The COVID-19 pandemic is likely to increase depression and anxiety, and mothers with infants and young children may need extra support. A high proportion of new mothers in the United Kingdom reported feelings of low mood, loneliness and anxiety during the country's lockdown due to COVID-19, and social support from partners, family and peers, as well as support for her own health, were important for better mental health.[16] Mothers and communities need to be educated about mental health, and where and how to access support. The assessment and diagnosis of the mental health status of mothers should be better integrated into health services so that health workers are more aware of the issue and can also consider it in their infant feeding counselling.

How can we support infant and young child feeding in different settings?

Families and communities

In order to create supportive environments for optimal feeding, infant feeding communication needs to engage not only mothers, but also families and communities.[5] A communication study demonstrated how these groups need different kinds of information to persuade them to support optimal feeding.[17] South Africa has evidence of societal pressure and family interference,[18] as well as the strong influence of grandmothers on infant feeding[19, 20]. Engaging with these influencers to address their particular needs and interests can increase optimal feeding practices.[17] Unwed mothers, in particular, face pressure to adhere to family traditions and decisions related to feeding. In the context of South Africa's high level of absent fathers, buying infant formula is one way that families pressure males to take responsibility.[21] This pressure is closely related to a common perception that formula is superior to breastmilk.[21] A change in infant feeding practices is unlikely if these influencers are not engaged and their concerns addressed.[10]

Health systems and services

Health systems and services should inform and support mothers in optimal infant feeding decisions from the time they access services antenatally, to discharge after delivery, and continue when mothers access health services with their infants. One such initiative is the Mother Baby Friendly Initiative (MBFI). This should ensure a continuum of care that starts antenatally, continues during birth and delivery, and into the community environment. South Africa has made significant improvements in MBFI accreditation but sustaining MBFI practices after accreditation has been problematic.[22] The MBFI has led to increased initiation of breastfeeding

in birthing facilities, but exclusive breastfeeding rates have remained low.[23] Step 10 of MBFI – the creation of breastfeeding support for mothers in communities – is often inadequate.[24] Stronger linkages are needed between health facility and community-based support, such as La Leche League, the Philani mentor mother programme, Flourish, and Mothers-to-Mothers. The training and employment of an adequate cadre of community health workers (CHWs) in ward-based outreach teams must also be ensured to provide better postnatal support to mothers through home visits.

Case 12: How is the marketing of foodstuffs for infants and young children regulated in South Africa?

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As urged by the WHO's International Code of Marketing of Breast Milk Substitutes,[56] the South African Department of Health legally instituted the Regulations R991 Relating to Foodstuffs for Infants and Young Children,[57]gazetted on 6 December 2012. The Regulations R991 aim to protect and promote optimal infant and young child feeding, encourage safe and appropriate use of commercially processed foods, and remove commercial pressures from the infant feeding environment so that all caregivers receive independent, objective information and all mothers who wish to breastfeed are supported to do so.

Implementation, monitoring and enforcement of R991 are challenging due to fragmented scopes of practice and capacity constraints. Violations are currently reported on an ad hoc basis by individuals or organisations to the National Department of Health (NDoH) and are usually resolved by mediation between government officials and the violators. However, R991 states that "Any person who contravenes these regulations is guilty of an offence and is liable to penalties as prescribed by the Act", which include fines and imprisonment.[57] These penalties have not yet been used to enforce R991, partly due to the lack of monitoring of the regulations and the rehabilitative approach of the NDoH. This is linked to a shortage of environmental health practitioners, who are the designated 'inspectors' for all regulations of the Foodstuffs, Cosmetics and Disinfectants Act;[58] capacity constraints at a national level; and a lack of awareness among key stakeholders, including the child health community.

Since R991 was gazetted, there have been many violations by breast milk substitutes (BMS) manufacturers, retail outlets, health establishments and health professionals. Most violations related to labelling and promotion in retail outlets have been stopped, but it is particularly difficult to stop violations on digital platforms, including websites and social media. Companies (including BMS manufacturers) use these spaces to implement carefully calculated marketing algorithms to personalise and target marketing to specific consumers.[4] Manufacturers of BMS have large marketing budgets and trained professionals whose sole responsibility is to create brand presence, loyalty, and relationships with consumers.[59] Digital content also changes rapidly, and it is often argued that many provisions of regulations are open to interpretation, even though Guidelines for Industry and Health Care Personnel on R991 have been developed by the NDoH.[60] On South African social media platforms, there are many posts by BMS manufacturers that use subtle tactics to violate national legislation and global guidance. This is remarkably similar to what has been found in high-income countries.[59]

Several actions are needed:

- A comprehensive update of R991 is needed as both global guidance and digital marketing tactics have changed and expanded significantly since 2012.
- The Foodstuffs Act needs to be updated to strengthen the monitoring of different regulations. Designated inspectors need to be trained so that they can identify, report and resolve violations efficiently. In addition, all stakeholders (health professionals, distributors, retailers, advertisers, conference organisers and the general public) need to be sensitised to the content and principles of R991. This would probably best be achieved via a mass public health awareness campaign.
- Lastly, it is the responsibility of everybody – local authorities, manufacturers, distributors and retailers, health professionals, health facilities, the media and civil society – and not only government, to report violations[i] and ensure that regulations such as R991 are implemented. This "whole of society approach" is the only way that infant and young child feeding will be protected, promoted, and supported in South Africa.

i Violations of the Regulations R991 can be reported by sending an email with photographic evidence and as much of a description of the violation as possible (date, time, place, type of violation) to Madome Manyuha at the National Department of Health: codewatch@health.gov.za

A lack of health and nutrition promotion and suboptimal use of the Road to Health Booklet messages is also of concern.[25] Health care workers (HCWs) play an important role in influencing the infant feeding decisions of mothers. Still, there is an abundance of inconsistent messages and misinformation on IYCF from HCWs.[19, 26-28] Paediatric food-based dietary guidelines have been tested[29] but not yet adopted by the National Department of Health (NDOH).

The screening and identification of malnutrition and appropriate IYCF counselling by HCWs in South Africa could still be improved.[30] This is a great concern given that there are likely to be more malnourished children due to COVID-19, and efforts need to focus on preventing wasting in children.[31] The routine measurement and assessment of length/height, weight and mid upper arm circumference of all infants and young children needs to be enforced at all healthcare facilities. Community-based growth monitoring and nutrition surveillance utilising CHWs in ward-based outreach teams needs to be strengthened for the early detection and support of malnourished children. Bhutta and colleagues emphasise that in addition to education on complementary feeding, food supplements need to be provided to food insecure populations.[32] The network of local food parcel distribution strengthened due to the COVID-19 pandemic could be further leveraged, and the momentum and lessons learnt from the experience of food distribution during the lockdown taken advantage of to reach vulnerable infants and young children.

There is already some evidence of how COVID-19 has impacted the public health care sector in South Africa. Twenty-five percent of women did not go to the clinic when their child needed immunisation, and 11% of HIV positive mothers reported running out of their antiretrovirals (ARTs).[33] Fear of the coronavirus was the most common reason cited for not accessing healthcare services.[33] Communities need to be reassured and reminded to continue to safely access essential services such as immunisation, growth monitoring and vitamin A supplementation, as we deal with COVID-19. It is not known what mothers in South Africa have experienced with regards to infant feeding support since the COVID-19 lockdown and social distancing measures were put in place. Close to half of the mothers who had delivered during the United Kingdom lockdown indicated that they had inadequate help and support with regards to feeding their infants.[34] Mothers should be supported to practice rooming-in (i.e. mother and infant stay together 24 hours a day), and health workers must reassure mothers and communities on the safety and benefits of breastfeeding, in addition to the messages provided on government platforms like Side-by-Side or MomConnect.

The workplace

The little evidence currently available in South Africa indicates few supportive breastfeeding practices in the workplace.[35] The lack of breastfeeding breaks, lack of space to express breastmilk, unsupportive supervisors and pressure from colleagues, all contribute to women feeling that they do not have breastfeeding support at work.[36] One of the barriers to workplaces supporting mothers may be the perceived cost implications of interventions,[37] and employers may be uncertain how to create an enabling workplace environment. Providing space for employees to breastfeed/express, and breastfeeding/expressing breaks, are low-cost interventions[10] that can reduce the obstacles that many employed breastfeeding women face.

Legislation is an important driver of workplace support for breastfeeding. According to Section 25 of the Basic Conditions of Employment Act,[38] employees are entitled to at least four consecutive months of maternity leave. Yet most maternity leave is unpaid or partially paid. Many women in informal and domestic work sectors, and women living in vulnerable communities, do not get assistance from the maternity benefit fund as they are ineligible (they do not contribute to the Unemployment Insurance Fund). Women often return to work early as they do not have any income, and are then separated from their infants.[23] Another improvement in legislative directives is the passing of paid parental leave effective from 1 January 2019, which introduced 10 days leave for parents who are not biological mothers (mostly fathers and adoptive parents).[39] This change is very important for breastfeeding as it allows partners to support mothers.

In terms of the Code of Good Practice on the protection of employees during pregnancy and after childbirth, employees who are breastfeeding are entitled to 30-minute breastfeeding breaks twice a day for the first six months of the child's life.[40] In reality, employees and employers are mostly unaware of these legislated breastfeeding breaks.[23, 36] Furthermore, the Code fails to address the requirement that the employer provides a suitable space for expressing and storing breastmilk. Neither does it specify whether the breastfeeding breaks are paid or unpaid, and there is no provision for penalties for employers who fail to comply. The Department of Labour needs to monitor the implementation of the Code to ensure better compliance. The NDOH should consider recognition and rewards (e.g. tax breaks) for employers acting in support of breastfeeding.

Case 13: Preventing NCDs using social and behaviour change communication: Evidence-based and multi-level Infant and Young Child Feeding promotion

Sara Jewett[i]

A growing body of evidence highlights the link between early nutrition and the development of non-communicable diseases (NCDs). For instance, exclusive breastfeeding (EBF) for the first six months has been associated with a reduced risk of type-2 diabetes later in life.[71,72]

Rollins and colleagues's conceptual framework on the determinants of infant and young child feeding (IYCF) identifies a range of influences from the individual beliefs and perceptions of parents, to family pressure, socio-cultural norms and the structural environment, including policy.[73]

Interventions that seek to promote healthy IYCF practices must therefore address the key barriers and/or facilitators at each level of the socio-ecological system as outlined in Figure 16. McKee and colleagues propose three key strategies to support change:[74,75]

- **Advocacy** to address policy and legislation
- **Social mobilisation (SM)** to address social norms and reinforce other strategies
- **Behaviour change communication (BCC)** to address individual or interpersonal barriers or facilitators of change.

Each strategy has a range of specific techniques or approaches that can be chosen based on the context. In South Africa, where NCDs are high and EBF is low, we have synthesised evidence on barriers and facilitators of EBF.[76] However, our knowledge of community and structural barriers rarely translates into communication that addresses community leaders or policymakers.

BCC strategies are most commonly used in IYCF interventions, often focusing on changing the knowledge and beliefs of mothers or supporting healthcare workers. There are many different BCC tools to choose from - brochures and motivational interviewing techniques to mass media, edutainment and participatory drama. An example of a BCC campaign that draws on multiple individual and interpersonal tools is the Department of Health's Side-by-Side Campaign.

SM strategies complement BCC interventions. By building alliances to shift social norms and build collective efficacy, SM emphasises the importance of social dynamics in supporting (or preventing) optimal ICYF. For example, university staff and students have successfully mobilised for the provision of breastfeeding rooms[77,78] and are pushing for divestment from conflicted partnerships with the formula industry to create more enabling environments[79].

Advocacy strategies, including media advocacy, lobbying and policy advocacy, can alter the structural determinants of IYCF. While South Africa has policies in place to restrict the promotion of breastmilk substitutes,[80] other WHO dietary 'best buys', such as front of package labelling or banning of trans-fats,[81] are not in place. Selection of advocacy targets needs to account for context. With high levels of food insecurity, exacerbated by COVID-19,[82] IYCF activists are rightfully calling for an extension of the Child Support Grant to pregnant mothers to support their healthy food choices[83].

Whatever the mix, strategy selection should be based on evidence of which barriers or facilitators are most likely to shift behaviours and impact on health outcomes, e.g. NCDs, at the population level. This information can be gleaned from reviews of past interventions as well as primary research. A clear Theory of Change should clarify the logic behind the combination of strategies that are selected. For instance, if we increase working mothers' motivation to EBF; provide breastfeeding rooms at work and extend paid maternity leave, then EBF and continued breastfeeding among working mothers will increase.

In most instances, a combination of evidence-based strategies has more impact than campaigns focused on a single audience, e.g. mothers. SBCC campaigns addressing multiple audiences should be coordinated to ensure messages are harmonised, mutually reinforcing and coherent. For further step-by-step instructions on how to select SBCC strategies and design SBCC campaigns, visit sbccimplementationkits.org/courses/designing-a-social-and-behavior-change-communication-strategy.

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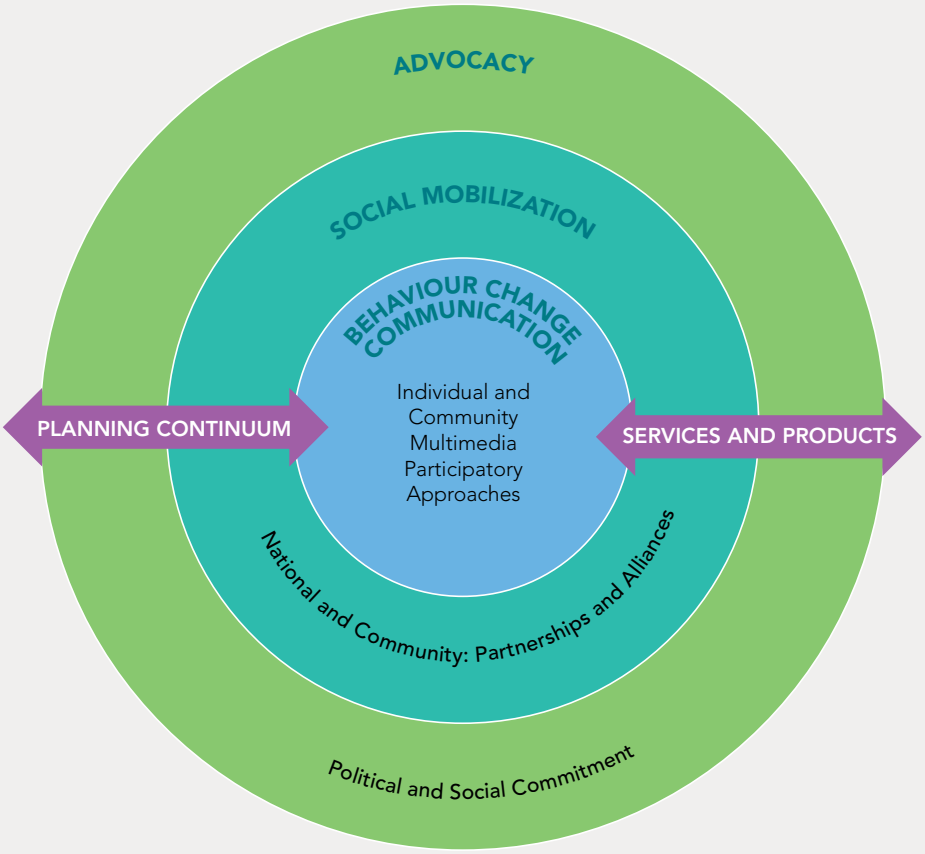
Figure 17: Social and behaviour change communication operates through three main strategies

Based on the socio-ecological analysis we can now choose the appropriate mix of strategies to address change:

Advocacy to raise resources and political and social leadership commitment for development goals;

Social mobilization for wider participation and ownership, including community mobilization; and

Behavior change communication for changes in knowledge, attitudes and practices of specific participants/ audiences in programs



Source: C-Change. C-Modules: A Learning Package for Social and Behavior Change Communication (SBCC). Washington, DC: C-Change/FHI 360. 2012.

An advocacy and communication campaign on the benefits of breastfeeding support for employers and employees, and the breastfeeding rights of employed women, is needed. The 'Breastfeeding in the workplace' toolkit and guide for employers and employees, developed by the NDOH,[41] should be the cornerstone of these efforts. The workplace breastfeeding support practice model is a useful tool that provides specific guidance to workplaces that want to start and/or strengthen the process of creating an enabling environment for breastfeeding.[36]

How can we address the societal drivers of infant and young child feeding?

Socio-cultural norms

The timing and content of what is fed to infants and young children is influenced by social and cultural beliefs. Mixed feeding before six months is a well-documented social norm in South Africa, closely related to beliefs that breastmilk is insufficient to nourish a child.[42] While the breastmilk substitute industry has exploited and reinforced such beliefs,[43] these beliefs also have social and cultural origins. Early ethnographies show that mixed feeding practices predated commercial formula.[44] The persistence of mixed feeding despite multiple infant feeding guideline changes highlights the socially embedded nature of this practice.

Infant feeding practices also relate to traditions that may be specific to particular ethnicities. Some of these are contextual, such as *ipupho*, where a mother's milk is considered unclean because she has been bewitched through a sexual dream.[45] Other cultural practices are designed to support infant health, such as the traditional Zulu medicine of *umfula* for 'cleansing' the infant's bowels of perceived impurities.[46] Many mothers are reluctant to abandon such practices, both because they share the beliefs and because they fear alienation from their social support if they were to refuse.[47] People in close-knit family or community systems experience pressure to follow social and cultural norms. Those who do not may face stigma or exclusion.[21, 48] As such, listening to communities about why they hold particular beliefs or norms about infant feeding is an important first step to meaningful change.

Table 12: Key recommendations to improve infant and young child food and nutrition security in South Africa

- If an improvement in infant and young child feeding practices is desired in South Africa, then mothers must be supported (financially, emotionally, socially)
- The NDOH should better integrate mental health screening and support for mothers into the healthcare system, and raise awareness of mental health in communities
- Communication to engage with community practices and norms in the area of infant and young child feeding should involve families and communities
- Breastfeeding mothers should be referred to community-based breastfeeding support groups and community health workers for postnatal support
- Health facility and community-level growth monitoring and promotion, and infant feeding counselling need to be improved
- All healthcare workers and healthcare delivery platforms need to convey consistent, standardised messages about optimal infant and young child feeding
- Advocacy and communication on workplace support for breastfeeding is needed, and employer practices in this regard need to be monitored
- Early access and a possible increase in the CSG need to be considered
- Formula marketing practices and transgressions against R991 needs to be monitored and reported to the NDOH
- Research and innovation in infant complementary foods needs to be supported
- Local nutrient-dense affordable foods for complementary feeding should be promoted
- The food parcels given to food insecure households with infants should include appropriate foods and supplements for complementary feeding

While breastfeeding is the norm in many communities, some mothers report discomfort in public settings, such as shopping malls or restaurants. Public shows of support for breastfeeding, whether in the form of a sign in a restaurant or an announcement made by a religious leader, are important in the normalisation of breastfeeding. These efforts alone, however, will not dismantle the sexualisation of breasts, which is the cause of some mothers' discomfort.

Market forces and economic considerations

South Africa has a high unemployment rate and a high reliance on social grants.[2] With unemployment increasing due to the COVID-19 pandemic, household income will be diminished even further and the reliance on social grants to meet needs will be higher. This will decrease household food security and make more children vulnerable to hunger and malnutrition. Consideration needs to be given to increasing the Child Support Grant (CSG), ensuring early access to the CSG, and providing regular food parcels to vulnerable households with nutrient dense food items that can help meet infant and young children's nutrient needs.

Another major market factor affecting infant feeding decisions is the promotion of formula milk. For many years, formula milk was marketed as an aspirational product, associated with prestige and social success, which undermined breastfeeding. This image is very difficult to undo.[49] While regulations around the marketing of breastmilk substitutes in South Africa, such as R991[50], are in place, global evidence suggests that the role of the food industry in marketing inappropriate products to infants and young children requires close surveillance, as much of this marketing takes place 'below the line' on social media (see case 12). A recent study on the high sugar content of baby foods in South Africa highlights the need for better regulations as well as parent education about food labels.[51] The study found that over 70% of food products targeting infants under one-year-olds in South Africa were sweet tasting, predisposing infants to developing a preference for sweet-tasting foods from an early age.

Helping families overcome barriers to feeding their children appropriate complementary foods, and promoting local foods, are two options proposed by Lutter and colleauges.[52] The Global Alliance for Improved Nutrition (GAIN) and UNICEF have highlighted chicken, fish, peanut butter, dried beans, beef liver, chicken liver, carrots and milk as the most affordable foods to fill nutrient gaps in the diets of children in South Africa.[53] Even though most of these food items are VAT exempt, the food price increases and household food insecurity seen this year will make these items more unaffordable for many households. The non-perishable items identified should be priority considerations for inclusion in food parcels to vulnerable households.

Processed food products can have a place in infants' diets in terms of convenience and providing a nutrient-dense option, but there are also commercial products commonly eaten by under one-year-old infants, such as processed meats, juices/sugar-sweetened beverages, chips or crisps and sweets or chocolates,[54, 55] that may displace more nutritious options. The infant feeding challenge provides an opportunity for innovation by the food industry – whether through biofortification or improved bioavailability of their fortified products for infants or exploring how to make these products more affordable and accessible. If it is possible to make healthier product offerings for the adult market, then it should be possible to make nutrient-dense options available for infants and young children (see Case 14).

With the surge of food hampers and emergency food supplies being made available to assist families with COVID-19, monitoring and enforcement of regulations on infant foods[50] will need to be strengthened. Guidelines need to be updated and disseminated to all providers of food parcels to provide greater clarity on how best to provide healthy and affordable foods for infants. Some manufacturers of breastmilk substitutes may see emergencies as an

Case 14: Opportunities and constraints for developing nourishing, indigenous complementary foods[i]

James Makame, Henriette De Kock and Naushad M. Emmambux[ii]

Child malnutrition remains a major public health problem, especially in Africa which is home to 40% of the world's stunted children.[61] This is partly because most African children are nourished on available and refined indigenous starch-based foods (such as cereals, roots, tubers and plantains).

The World Health Organization recommends exclusive breastfeeding for the first six months of life followed by the introduction of complementary foods and continued breastfeeding for at least two years to meet infants' nutritional requirements.[62] Indigenous starch based complementary porridges in rural and poor communities are usually prepared at home from cereal grains and root crops that are locally available and more affordable.[63-65] Yet the oral texture and viscosity of complementary porridges made from maize, cassava and sorghum are often difficult for infants to handle, even when diluted.[66,67] Diluting the porridge can lead to underweight as the resultant thin porridge does not contain sufficient nutrients to meet children's nutritional requirements. Therefore, indigenous complementary porridges should be appropriately adapted to make them safe and easy for infants to consume.[68] Orange-fleshed sweet potato has similar oral processing qualities to commercial porridge, but it is low in protein content and quality per dry weight. Cereals and roots crops (e.g. cassava) also lack the essential amino acid lysine, and some contain anti-nutritional factors (e.g. phytates and tannins) which inhibit the absorption of minerals (e.g. iron, zinc, calcium).

Opportunities and interventions

Roasting, malting, fermentation, germination and souring can be used at household level to reduce viscosity, produce pleasant textures and improve nutritional and cooking qualities of indigenous complementary foods.[9] Cereals, roots and tubers also need to be combined with pulses (e.g. peas, lentils, cowpeas and Bambara groundnuts) which are sources of good quality protein in order to develop more nourishing home-made porridge for children. These composite flours then need to be pre-processed to create a porridge that is easy for children to swallow.[70]

Research and development should aim to make indigenous complementary foods more nutritious, affordable and accessible to children. Africa must also invest in low-cost, convenient technologies (such as extrusion cooking, microwave and infrared heating) to process indigenous foods at community and household levels. This may require strong partnerships amongst consumers, industry, farmers, researchers and government to enhance technology transfer, so that African children derive health benefits from indigenous food crops. Policies promoting nutrition-sensitive food system value chains such as investments in appropriate agro-processing facilities are prerequisites. Children's diets must have a healthy balance of cereals, legumes, fruits and vegetables, dairy and meats. Overall, there exist great opportunities for developing nourishing indigenous complementary foods to enhance the nutritional status of African children.

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opportunity to distribute and market their products to needy and willing charities and organisations calling for donations of food. The infiltration of these products into communities can set a dangerous precedent for their continued use after COVID-19 and is likely to harm breastfeeding practices.

Table 2 summarises the key recommendations for improving infant and young child food and nutrition security in South Africa. As determinants of optimal IYCF are interrelated, government as well as child advocates need to prioritise which interventions are most likely to result in measurable and sustained change, not just alone, but synergistically (see case 13).

Conclusion

Infant and young child food and nutrition security is shaped by determinants at different levels and as such requires intervention and support at the level of the individual mother and child, the family and community, health systems and services, and the workplace. It also requires interventions to address societal determinants such as socio-cultural norms, and market and economic forces. These interventions require multi-stakeholder commitment and coordination, with clearer accountability and timelines in place to ensure they make a meaningful difference to the lives of children. A very real and urgent situation presents itself right now: if health services fail to engage with community-based organisations and social welfare services, then the battle against hunger and malnutrition will not be won. Commitment is not enough – clear implementation plans from all sectors of government are needed. We cannot afford not to act to improve infant and young child feeding. If we do not invest now, it will cost us more to repair the damage in the future.

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Food and nutrition security for the preschool child: Enhancing early childhood development

Camilla Thorogood,[i] Hilary Goeiman,[ii] Lizette Berry & Lori Lake[iii]

Early childhood development and nutrition are intrinsically connected. In this chapter, we explore the factors that either support or hinder health, growth and neurodevelopment during the preschool years. We show how the health and development of many young children are compromised by poverty and malnutrition and how without intervention this is likely to continue into adulthood. Early childhood development (ECD) programmes provide an opportunity for intervention to improve the nutrition of young children, in addition to social protection and healthcare services. These support systems for families with young children need to be strengthened to level the playing fields and ensure that all South Africa's children can reach their full potential.

In this chapter, we examine the following questions:

- Why invest in young children's nutrition, health and development?
- What is the nutritional status of young children in South Africa?
- How do children's living conditions impact their nutritional status?
- What are the key interventions to promote optimal nutrition in young children?
- How can programmes that support optimal nutrition be strengthened?

Why invest in young children's nutrition, health and development?

The first 1,000 days of life (from conception to the child's second birthday) lay the foundation for optimum health, growth and neurodevelopment. This time of rapid brain growth and development is the period of life with the "greatest developmental plasticity where the infant's developing body and brain are particularly sensitive to their environment."[1] If this developmental period is neglected, a significant window of opportunity may be lost for setting in place the building blocks for human development.

Emerging evidence on the developmental origins of health and disease indicates how exposure to strong, frequent or prolonged adversity in the early years such as poverty, malnutrition, violence or neglect can – in the absence of responsive care and support – generate "toxic stress". This over-activation of the body's stress response weakens the immune system and architecture of the developing brain and can lead to lifelong problems in learning, behaviour and physical and mental health. Children living in poor households are more likely to experience multiple forms of adversity.

Poor nutrition is particularly detrimental for long-term physical growth and development, as stunted growth during this period is associated with later cognitive deficits and academic underachievement. Globally, millions of children under the age of five are not reaching their full potential due to, amongst other things, poor nutrition[2] and a lack of learning opportunities[3]. Similarly, in South Africa, children's ability to thrive is threatened by poverty, violence, malnutrition and unhealthy living conditions that compromise caregivers' physical and mental health, and their capacity to care for young children.

To address these challenges, children and their caregivers need a range of inputs and support during this critical stage of development, including good health care and adequate nutrition, a stimulating and safe environment, and emotional support and care. These elements together are known as nurturing care. During the first 1,000 days, the caregiving relationship is of utmost importance, as caregivers are the primary providers of nurturing care and help protect children from adversity.

Early childhood (2 – 5 years) is a critical time for further development, building on the basic architecture established during the first thousand days. Yet poverty, violence, household food insecurity and malnutrition continue to compromise health and development during the preschool years. Thus, continuity of care and support beyond the first 1,000 days is critical. This includes positive social support for caregivers, adequate nutrition, a healthy environment and access to childcare, early learning and healthcare services.

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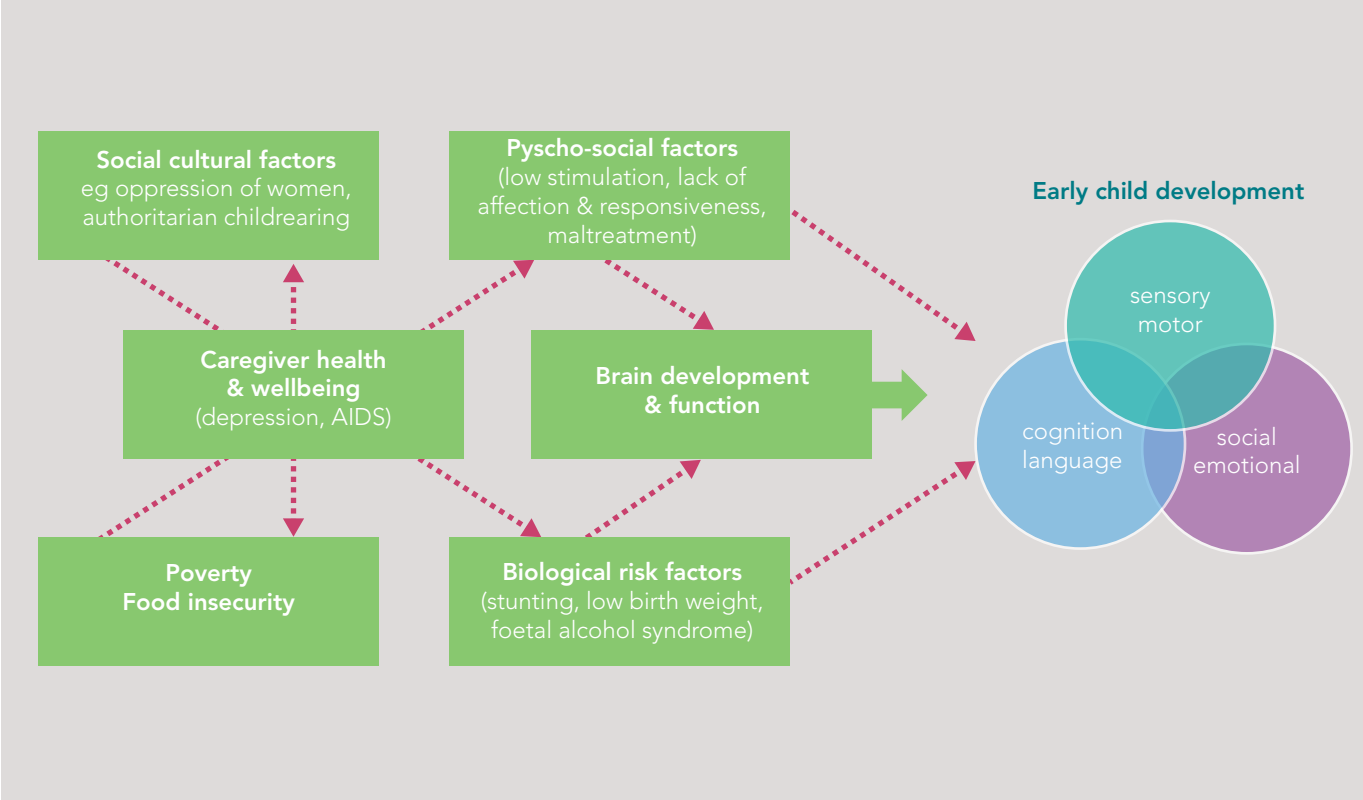
Figure 18: Risk factors affecting early childhood development



Adapted from: Walker SP, Wachs TD, Meeks Gardner J, Lozoff B, Wasserman GA & Pollitt A (2007) Child development: Risk factors for adverse outcomes in developing countries. The Lancet, 369: 145-157. In: Dawes A, Biersteker L & Hendricks L (2012) Towards Integrated Early Childhood Development: An Evaluation of the Sobambisana Initiative. Cape Town: Ilifa Labantwana.

Improving nutrition during early childhood in developing country contexts is a long-term economic investment in human capital. The positive relationships between nutritional interventions and cognitive development in the early years, and economic productivity in adulthood, is well documented.[4, 5] Good nutrition is necessary for optimal cognitive functioning, as well-nourished young children are better able to actively and attentively engage with their surroundings, a process that contributes to learning and development.

This growing evidence base informed the World Health Organization (WHO) and partners' development of the Nurturing Care Framework for Early Childhood Development,[6] which emphasises the importance of the first 1,000 days of life as a sensitive period of development, and the central role of parents and caregivers in providing nurturing care. The framework promotes an integrated, whole-of-government and whole-of-society approach to creating an enabling environment to support families in providing nurturing care to young children.

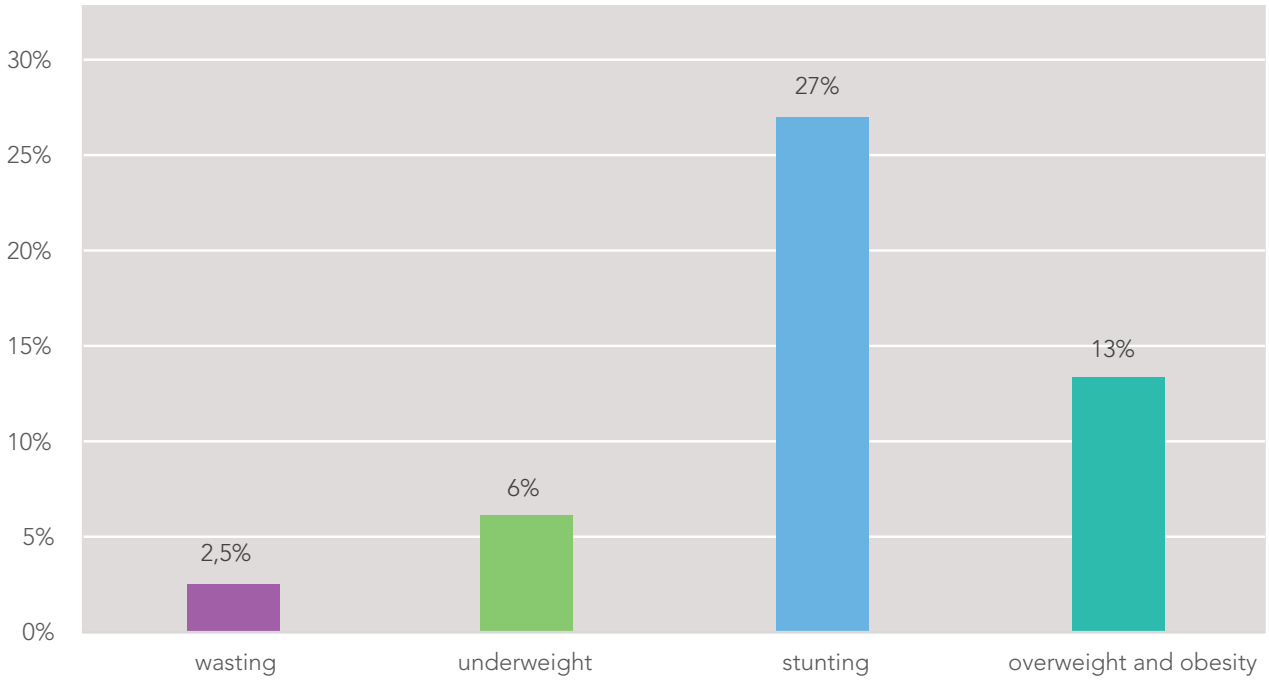
The WHO Guidelines for Improving Early Childhood Development, issued in 2020, provide global, evidence-informed recommendations for improving young children's developmental outcomes.[7] This includes an emphasis on responsive caregiving, the promotion of early learning, support for maternal mental health and the integration of caregiving and nutrition interventions. The Guideline Development Group evaluated evidence from 18 studies in lower- and middle-income countries and found that nutrition interventions on their own do not appear to have an impact on early childhood development. Yet, interventions that combine nutrition and responsive caregiving were found to benefit children's cognitive, language and motor development, and the impacts were greater when targeting malnourished children.

Responsive feeding and play are also critical elements in rehabilitating malnourished children. Adequate nutrition depends on responsive feeding as mothers and caregivers need to be actively engaged and in tune with their infants to recognise and respond to signs of hunger.

What is the growth and nutritional status of young children in South Africa?

Previous chapters in this issue of the *Child Gauge* have highlighted the importance of maternal nutrition and infant and young child feeding in building a strong foundation and

Figure 19: Anthropometric status of children under five, 2016



Source: National Department of Health, Statistics South Africa, South African Medical Research Council, ICF. South Africa Demographic and Health Survey 2016. Pretoria, South Africa and Rockville, Maryland, USA: NDoH, Stats SA, SAMRC and ICF; 2016.

setting the trajectory for children's optimal health, growth and development. For example:

- The high prevalence of low birth weight (15%)[8] is of concern as it increases the risk of undernutrition and childhood illnesses such as diarrhoea and pneumonia. But even children with a normal birthweight may become undernourished if they experience frequent infection or do not have access to an adequate dietary intake. Therefore, it is of concern that exclusive breastfeeding rates are low (32%) during the first six months of life, and only 23% of children aged 6 – 23 months have a minimum acceptable diet.[8]
- South Africa has made some progress with reductions in child hunger (down from 30% in 2002 to 11% in 2018)[9] and wasting – a sign of severe acute malnutrition and a key driver of under-five mortality – which affected 2.5% of children under-five in 2016[8].
- Stunting is a sign of chronic malnutrition and rates have remained unacceptably high for the past 20 years, affecting one in four young children (27%)[8]. Stunting not only affects children's physical growth, but it also impairs their cognitive development and ability to learn, with long-term consequences. Stunting rates rise from 8 months old and peak at 40% amongst children 18 – 27 months old,[8] suggesting that complementary feeding diets are inadequate.
- Young children also experience 'hidden hunger' with deficiencies in essential micronutrients impairing their immunity and cognitive development: 44% of children under five are deficient in vitamin A (44%),[10] and deficiencies of zinc (45%), iodine (15%) and iron (10%)[11] are high amongst children 1 – 9 years old.
- At the same time, overweight and obesity are increasing in young children and affected 13.3% of children under five in 2016.[8] This is more than double the global prevalence of 5.9%,[12] and overweight and obesity rates increase dramatically across the life course.

A double burden of under- and overnutrition is already apparent in early childhood as illustrated in Figure 19 and it predisposes children to obesity and non-communicable diseases in adolescence and adulthood. Therefore it is vital to intervene early to address these deficits and establish a solid foundation for health and development.

How do children's living conditions impact their nutritional status?

In 2018, there were just over seven million children under six years living in South Africa.[13] Young children's nutritional status continues to be circumscribed by poverty and inequality, with children in the poorest 20% of households three times more likely to be stunted than those in the richest 20%.[8]

Case 15: Strengthening the delivery platforms for children with acute malnutrition

Mariame Sylla and Gilbert Tshitaudzi[i]

Wasting or severe acute malnutrition (SAM) remains a significant underlying cause of child mortality in South Africa, being associated with one-quarter of all child in-hospital deaths.[60] While prevalence is low at 2.5%, mortality rates in children with SAM are nine times higher than those in well-nourished children.[61] For much of the past few years, provincial efforts to address acute malnutrition have primarily focused on providing treatment for severely malnourished children in healthcare facilities. The District Health Information System routine data indicates that the national severe acute malnutrition (SAM) case fatality rate (CFR) has declined steadily from 19.3% in 2009/10 to 7.7% in 2019/20. This varies amongst districts and facilities, with some of these still experiencing a CFR of more than 20%. Yet, in 2019, just over 11,000 children were admitted for treatment for SAM out of the estimated national burden of 151,798 children.[62] The proportion of SAM children accessing treatment remains unacceptably low due to missed opportunities in identifying children with SAM at community-level.

It is therefore critical to intensify active case finding and to recognize and treat children with acute malnutrition before they become severely wasted. Many countries have decentralized the diagnosis of acute malnutrition from a strictly hospital-based approach to the current model of outpatient care for children with uncomplicated SAM, and inpatient care for children presenting with complications or failing to respond to treatment. Yet, in South Africa, the outpatient care model has not been fully realized due to the hospicentric healthcare system, in which all acute malnourished children are treated in a hospital.

Preventing acute malnutrition generally requires that children are born to healthy, well-nourished mothers who receive appropriate antenatal care and live in households with access to adequate food, potable water, safe sanitation, good hygiene and care practices and quality primary health care. It is also vital to strengthen early detection of growth faltering and acute malnutrition. It has been shown that identification of children at risk of acute malnutrition at a community level can be performed by using low-literacy and low-cost mid upper arm circumference (MUAC) tape, which can be performed by minimally trained personnel such as community health workers (CHWs) and even mothers and caregivers.

The Family Mid Upper Arm Circumference (MUAC) approach trains mothers and other caregivers to identify early signs of malnutrition in their children using a simple to use MUAC tape.[63] The family MUAC approach puts mothers, caregivers and family members at the centre of wasting screening, acknowledging that families are in the best position to detect wasting early as well as other danger signs. Involving mothers in screening their children and checking for edema and other danger signs is a key step in increasing access to care for children in any area where SAM poses a high risk of death or illness and can lead to a reduction in costs. Given this challenge at the community level, various countries have started to implement and scale-up the family MUAC approach, also known as MUAC for mothers or Mother-MUAC.[63,64] An ongoing pilot project in selected districts in South Africa will shed some light on how this approach can improve coverage and active case finding of children at community level for prevention, early identification, referral and treatment of childhood illnesses, including acute malnutrition.

Improving quality of care for children in need of SAM treatment is critical. A key recommendation is to make treatment of SAM a routine part of primary and community health care, by leveraging and integrating into existing platforms at facility and community level. This will require prioritization of funding for SAM treatment. Making the treatment of SAM routinely available and accessible will require targeted actions across several components of the health system, including healthcare workers, financing, governance and service delivery. It will also require modifications to ensure that health services treat children with SAM until they achieve full recovery from the condition, and that key commodities (e.g. Ready to Use Therapeutic Food) are routinely available and managed as part of the essential medicines list. Additional complementary action will be needed to increase caregivers' capacity to seek care and offer those living in hard-to-reach areas equitable access to the care they need.

i UNICEF South Africa

Yet 25 years after apartheid, South Africa remains one of the most unequal countries in the world. Nearly 60% of young children live below the upper bound poverty line (with a per capita income less than R1,183 per month), and 33% live below the food poverty line of R547, a more extreme form of poverty with insufficient income to meet a child's nutritional needs.[14] COVID-19 has exposed and intensified inequalities, with unemployment rising sharply due to lockdown. Hunger and malnutrition are projected to increase during the subsequent economic recession, with young children being especially vulnerable.

Poverty is multidimensional, and children in poor households are likely to experience multiple forms of deprivation that are mutually reinforcing. Thirty percent of young children live in households without safe and adequate water, 23% without adequate sanitation and 11% without electricity for heating and cooking,[15] compromising both hand and food hygiene and increasing the risk of infection. One in ten young children still live in informal housing, and one in five live in overcrowded households.[15] These poor living conditions are further compounded by reduced access to services, with 20% of young children travelling more than 30 minutes to reach a healthcare facility[16]. In addition, poor households seldom have access to learning resources such as reading material, and adults' functional literacy rates are relatively low.

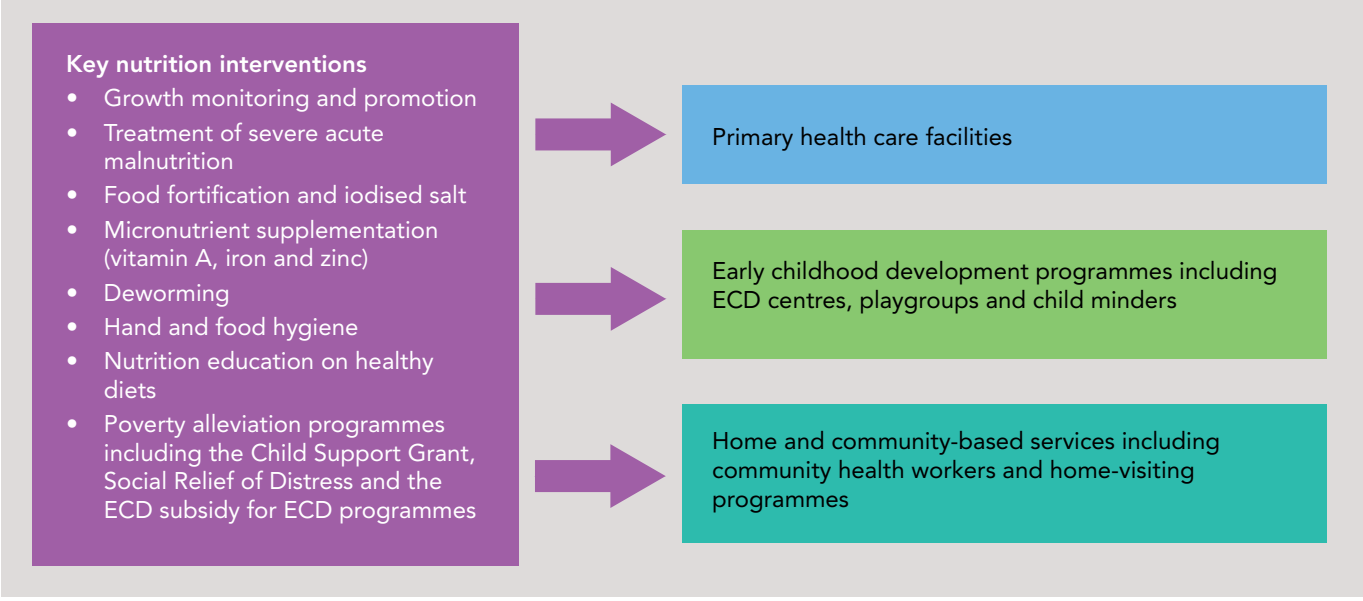
It is, therefore, not surprising that a study assessing children attending 10 different early learning programmes in six provinces found that only 29% of children (4 – 6 years old) were developmentally on track in 2018. Key gaps included cognitive and executive functioning (the ability to plan, focus attention, remember instructions and control impulses) together with early literacy, numeracy, fine motor control and visual-motor integration.[17] Taller children (with higher height-for-age Z-scores) performed better on these early learning outcome measures than stunted children,[17] reinforcing the importance of investing early in nutrition to support early learning and development.

What are the key interventions and platforms to promote optimal nutrition in young children?

The 2015 National Integrated Early Childhood Development (NIECD) Policy[18] outlines the South African government's commitment to providing a comprehensive, universally available and equitable ECD service that supports children from conception until the year before they enter formal schooling. It defines an essential package of ECD services to promote children's physical, cognitive, emotional and social development by providing maternal and child health services, nutritional support, support for primary caregivers, social services and protection, and early learning programmes.

The NIECD Policy has a strong focus on nutrition and calls for the review and strengthening of a national food and nutrition strategy for children under five as a key priority to ensure the delivery of a comprehensive package of food and nutrition support, and improve the nutrition, health and development of young children.[18] This strategy requires a coordinated response across different sectors to ensure:

Figure 20: Key nutrition interventions and delivery platforms to reach young children



- The delivery of essential nutrition and healthcare services;
- The establishment of norms, standards, menus and curricula for ECD practitioners to promote the provision of nutritionally balanced food through ECD programmes;
- The development of national norms and standards for hygiene and food safety, and improved access to environmental health services including water, sanitation and refuse removal;
- A food and nutrition communication and education campaign to prevent all forms of malnutrition;
- The establishment of food gardens in homes, communities and ECD centres; and
- Improved household food security by stabilising food prices and increasing access to income-generating projects and social grants.

In other words, a range of nutrition-specific and nutrition-sensitive interventions are needed to promote optimal nutrition during early childhood and to prevent and respond timeously to signs of malnutrition (Figure 20).

Potential delivery channels for these interventions include facility-based services (such as primary healthcare clinics and ECD centres) and community-based services that reach out to children and families in their homes. Community-based services are better able to support the most at-risk families who cannot access facilities or afford to pay for childcare.

The review that follows focuses on the potential of health care services, ECD programmes and social protection programmes to enhance the nutrition and food security of young children and identifies current gaps and opportunities for systems strengthening.

Healthcare services

The NIECD Policy identifies the Ministry of Health as the lead department for providing a package of services to promote health, nutrition and development during antenatal care, immunisation and well-baby visits during the first 1,000 days of life. This focus on nurturing care marks a paradigm shift, from an earlier focus on child survival to support for children's optimal health, growth and development.[19] It also requires the reorientation of health workers to play a more proactive role in supporting children's caregivers and families through the national under-five Side-by-Side Campaign.

The Road to Health Book (RTHB) is used as the central tool to deliver the full package of services to children under five and to guide conversations between health workers and children's parents and caregivers. The booklet focuses on five pillars: nutrition, love, protection, health care, and extra care.[20] It promotes exclusive breastfeeding, encourages counselling of mothers on appropriate and responsive complementary feeding and monitors children's growth to identify and respond to early signs of under- or overnutrition. Health workers are encouraged to use the booklet to support caregivers to love, play and talk to children to stimulate healthy development, and to screen children to identify and respond to developmental delays. It provides a record of children's medical treatment and guides the provision of vitamin A supplements, deworming and immunisation to strengthen children's immunity and prevent common childhood illnesses. Health workers are also encouraged to identify children in need of extra care such as children with disabilities, long-term health conditions and those exposed to poverty, violence or neglect, and to refer them for additional services and support, including social grants.

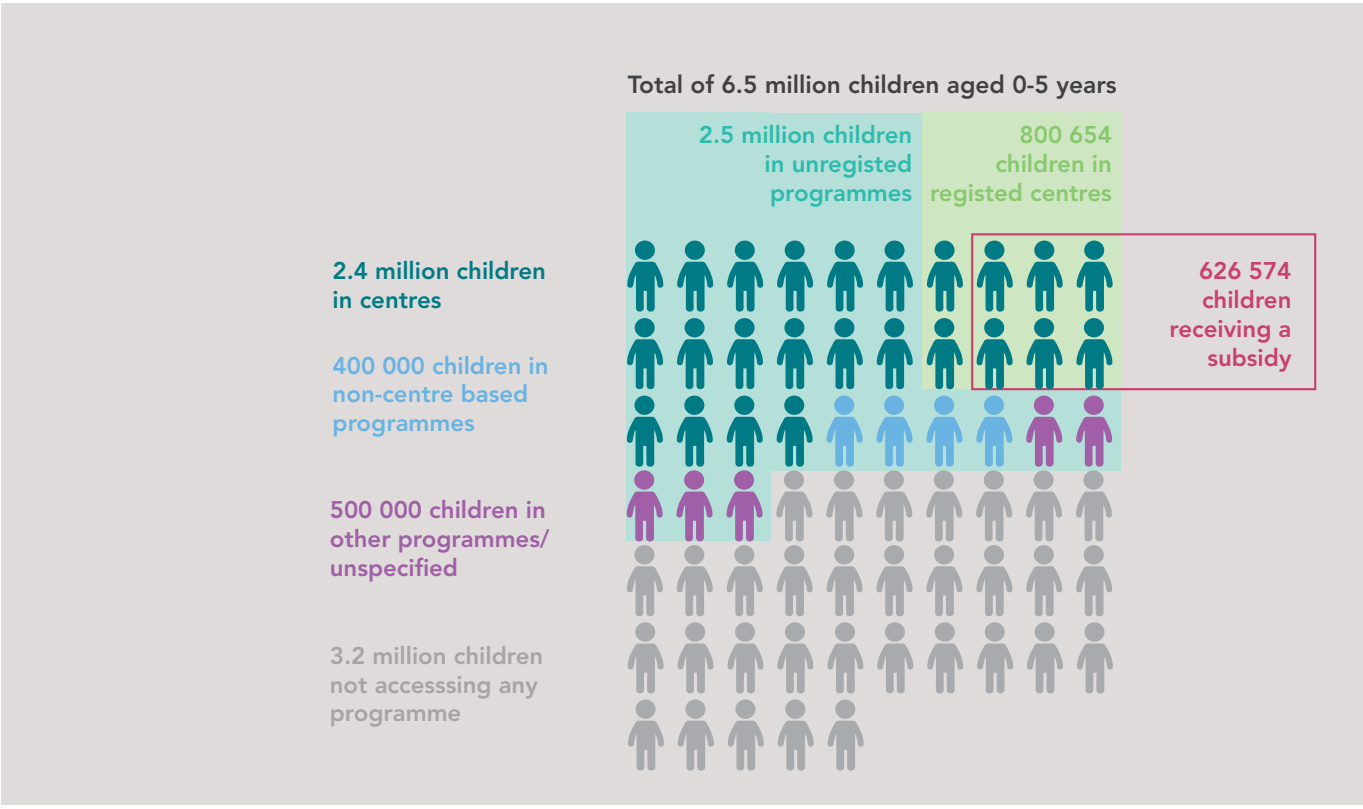
Facility-based care is convenient and desirable to ensure young children have access to quality and responsive health care. Yet 20% of children under five live more than 30 minutes away from a healthcare facility.[16] Furthermore, due to the expanded immunisation programme schedule requiring only two additional visits between 18 months and 12 years, attendance in health facilities drops significantly. Therefore, facility-based care needs to be complemented with outreach services through community-based health services, ECD programmes and home-visiting programmes. (see Case 16)

Dietitians, health promotion officers, occupational therapists and community health workers form part of primary health care outreach teams to screen, identify and support children at risk of malnutrition, developmental delays and disease. Key health and nutrition interventions such as immunisation, nutrition supplementation and health education are provided on-site. Environmental health practitioners also provide essential support services to ECD programmes to ensure compliance with food, hygiene and safety standards. Relationships between ECD programmes and health services can help increase access to health and nutrition services. Yet, the numbers and distribution of community health workers, environmental health practitioners, nutrition and allied health professionals, and ECD programmes remains limited. Greater investment is needed to take these community-based services to scale.

Early childhood development programmes

ECD programmes provide a range of services and support to young children or their caregivers to promote early childhood development. These programmes can be offered through ECD centres and other facilities, as well as non-centre-based programmes such as playgroups, toy libraries, child-minding

Figure 21: Access to early childhood development programmes for children (0 – 5 years)



Note: This excludes five-year-olds attending Grade R, which marks the start of formal schooling.
Source: Ilifa Labantwana, 2020.
Data sources: Statistics South Africa (2019) *General Household Survey 2018*. Pretoria: Stats SA.
National Department of Social Development (2020) *Social Development sets up workstreams to conduct risk assessment and state of readiness for the early childhood development ECD centres*. Media Statement. 4 June 2020. Accessed 4 December 2020: https://www.dsd.gov.za/index.php/latest-news/21-latest-news/183-social-development-sets-up-workstreams-to-conduct-risk-assessment-and-state-of-readiness-for-the-early-childhood-development-ecd-centres

services and home visiting programmes. Of the seven million children aged 0 – 5 years old, 3.3 million children are accessing some kind of early learning programme.[21] Older children are more likely to attend an ECD centre, with 69% of 3 – 5-year-olds attending a learning programme or Grade R, while 70% of 0 – 2-year-olds are cared for at home. ECD programmes, therefore, provide a useful platform for delivering services and support to young children at a time when they are no longer attending clinics regularly, while home- and community-based programmes are needed to reach out to younger children and their caregivers in their homes.

ECD learning programmes offer multiple benefits. They stimulate early learning, provide affordable childcare that enables primary caregivers to work or seek employment, and, for those that offer meals, they provide a critical contribution to children's daily nutrition intake.

The ECD subsidy

The Department of Social Development (DSD) provides a R15[iv] per-child per-day subsidy to support poor children attending registered ECD centres. The subsidy is intended to ensure more equitable access to ECD programmes and to help ECD centres provide nutritious food to children, pay salaries and provide educational materials – and 40% of the subsidy should be allocated for food.[22, 23]

However, access to the subsidy is not guaranteed and is subject to rigorous and onerous application processes for both the centre and caregivers. Individual children only qualify if their caregiver's income falls below the means test.[24] The current income threshold is applied variably as determined by the fiscal source (conditional grant or equitable share). However, the threshold and application process is not aligned to that of the Child Support Grant (CSG), creating duplicate application processes for poor families. There is concern that the subsidy's means test is lower than the CSG's (which came to R4,500 and R9,000 in October 2020) and effectively excludes many children living in poor households. This raises questions about why CSG beneficiaries do not automatically qualify for the subsidy in the same way that they are entitled to a school-fee exemption and a fee-waiver at public health facilities. The NIECD Policy calls for such alignment across systems to enable the most vulnerable families to access essential support seamlessly.[18]

iv This amount is set to increase to R17 per child/day in the new financial year. Some provinces are offering it at R16 per child/day.

ECD centres also need to comply with a set of minimum requirements to become registered. The Children's Act specifies a set of minimum norms and standards intended to protect children's health and safety and promote their development.[25] Yet the registration requirements, including the norms and standards, are impossible for many centres to achieve – prejudicing those centres serving poor and rural communities, and reinforcing inequalities in children's early childhood education, care and nutrition.[24]

Case 16: Philani's Mentor Mother Programme: An effective response to undernutrition

Claudine Bill[i]

The first 1,000 days of life are an important foundation for adult health and productivity – and thus a vital point of intervention.

Philani Maternal, Child Health and Nutrition Trust was established in 1979 to promote the health and well-being of mothers and children in impoverished communities on the Cape Flats. Philani's programmes include a community health worker programme called the 'Mentor Mother Programme', nutrition rehabilitation clinics, early learning centres, and an income generation project. The Mentor Mother Programme promotes family health, focusing on the support of pregnant mothers, care for newborn babies and children, and the support of people with chronic diseases. Philani uses community health workers called 'mentor mothers' (MMs) to identify growth faltering and malnourished children in the community, and to intervene to put these children back onto a healthy growth trajectory. In a country where a quarter of children under five years are stunted,[65] a fifth of households have insufficient food[66] and more than half of the children who die are undernourished,[67] this is crucial work.

The success of the Mentor Mother Programme is based on five key elements. The first is the **recruitment** of mentor mothers who are resilient and have successfully raised their own children in conditions of poverty. Their good coping skills form a foundation for the intervention and a passion for the job. MMs receive initial **training** in maternal and child health and nutrition, with subsequent modules in mental health, early learning, home-based care and alcohol harms reduction. Training is based on principles of adult learning and includes four weeks of interactive classroom teaching and two weeks of in-field pairing with an experienced MM. The **practical home-based intervention** is premised on an MM developing a relationship of trust with her clients, through which she can impart knowledge and foster coping skills. Within this supportive partnership, clients are enabled to change behaviour to improve health outcomes for themselves and their family, using resources available to them. MMs carry scales and weigh children, plotting and interpreting growth. They assist with breastfeeding; demonstrate bottle hygiene, formula preparation, and preparation of oral rehydration solution; and facilitate early learning and positive parenting. Supervisors lead small teams of MMs by providing hands-on, daily, in-field **support and supervision**. This continuous in-service training further develops the skills of MMs and fosters a culture of accountability. MMs have clear targets and outcomes and actively participate in the **monitoring and evaluation** of their cases.

Philani's 290 MMs work in two sub-districts of the Cape Town Metro, and in the rural OR Tambo district in the Eastern Cape. Philani has trained CHWs from other NGOs in South Africa and abroad, extending the footprint of the MM model. MMs work in the area where they live, are known and trusted, and become a valuable asset to their community. Each MM is responsible for visiting 300 – 500 households and has a caseload of 50 – 100 clients. MMs are skilled at identifying malnourished children, and refer severe cases or children not responding to the home-based intervention for nutritional support. Four hundred of these vulnerable children are treated every year in Philani's Nutrition Clinics in the Western Cape.

CHWs have an important role to play in maternal and child health in South Africa. Rigorous research provides evidence that Philani's MMs have a significant positive impact on the health outcomes of mothers and children. Mothers are more likely to breastfeed and breastfeed for longer; HIV positive mothers adhere better to treatment; and children are more likely to be well-nourished.[68] The intervention achieved a lower stunting rate of 18%; reduced child hospital admissions;[69] and reduced levels of harmful drinking. Philani's experience shows that CHWs who are properly trained, adequately equipped and well supported are capable of monitoring the growth of children and implementing a quality intervention for families.

i Philani Maternal Child Health and Nutrition Programme

The limited access to nutritional support through registered ECD centres stands in stark contrast to the state's support for school children. While 77% of children (9.6 million) attending public schools are supported by the National School Nutrition Programme,[26] the ECD subsidy supports fewer than 10% of young children, as illustrated in Figure 21, with regulatory exclusion and a rigorous application process excluding the majority of poor children who are most in need of nutritional support.[26-28]

A 2020 report calling for relief for the ECD workforce during COVID-19 noted that "while government may view unregistered ECD operators as non-compliant, they play a crucial role in caring for South Africa's children and allowing primary caregivers to either work or seek work, and are thus as important as any other part of the economy that government is aiming to protect from the damages brought on by COVID-19."[30] These facilities exist in low-income areas where the demand for affordable childcare is high, and where ECD programmes struggle to meet registration requirements.

The ECD subsidy is just one of a broader package of interventions and support that could and should be delivered through ECD programmes. Others include active support and outreach from primary healthcare services to provide deworming and vitamin A supplements, prevent and treat common childhood illnesses and identify and respond to signs of under- and overnutrition.

The food environment

It is equally important to pay attention to the quality of the food environment. The Nutrition Guidelines for Early Childhood Development Centres[31] provide ECD practitioners with clear guidance on planning, preparing and serving appropriate, nutritious, adequate and safe foods to children in their care. This includes guidelines on how to feed babies and young children, sample menus, recipes and shopping lists, personal hygiene, food safety, child health services and how to communicate this information and instil a positive attitude to healthy eating amongst children and their caregivers. The guidelines are an important addition, but unsubsidised ECD programmes may struggle to meet the requirements due to lack of finances. Therefore, the lack of adequate funding for the ECD sector should be addressed prior to the stringent monitoring of these guidelines. Similarly, it is likely that operators and staff of registered centres will need training and continuous support and mentoring to implement the guidelines.

Nutrition education

Nutrition education has also been identified as an essential element of the National Curriculum Framework for Birth to Four,[32] and as a specialized subject that needs to be incorporated into the education and training of ECD practitioners[33] (see case 17). It is, therefore, important to increase access to training opportunities for ECD service providers and practitioners.

Food gardens

Interesting innovations in nutrition-related programmes are being introduced by government and NGOs. For example, some ECD centres have established food gardens to supplement the children's nutrition and generate income, while the Expanded Public Works Programme (EPWP) has supported gardens at some ECD centre by providing stipends for gardeners.[34]

Social protection programmes

The NIECD Policy highlighted how "protecting households with young children from the stress and insecurity related to poverty is one of the most promising and cost-effective investments to secure early childhood and human development – with social assistance and cash transfers in the early years improving children's cognitive, emotional, language and fine motor development."[35] Local evidence confirms that early access to the CSG has a significant impact on both early childhood and later developmental outcomes.[36]

The ECD subsidy forms part of a broader package of support designed to alleviate poverty. Yet it provides only a small contribution to the daily nutritional requirements of a child. It is not available during weekends and school holidays, and it reaches only 10% young children - or 626,574 learners,[37] as illustrated in Figure 21. Nearly half of all young children (3.2 million) do not access any ECD programme,[38] and are therefore not receiving the subsidy.

Given the limited reach of the subsidy and ECD programmes, the CSG offers essential income support to young children. It is well-targeted, reaching 81% of children (0 – 5 years) living in poor households.[39] Access to the CSG has been associated with a decrease in child poverty and improved health, nutrition and education outcomes.[40]

Yet, the grant amount remains small at R450 a month (or R15 per day) in October 2020. As such, it falls well below the food poverty line and is not sufficient to eradicate stunting and micronutrient deficiencies or bring children

out of poverty.[23, 41] In addition, uptake is particularly low in the first year of life, with 36% of poor infants not receiving social assistance,[38] despite the NIECD Policy recommending registration for the CSG during pregnancy and the provision of birth registration services through health facilities to address administrative barriers[18]. This highlights significant gaps in social protection for young children who are most adversely affected by both the immediate shocks and long-term damage/deficits caused by malnutrition.

In the Western Cape, malnourished children can also access social relief of distress (SROD), a form of emergency relief in the form of vouchers or food parcels or cash in kind through the Department of Social Development's (DSD) Zero Hunger Campaign. The campaign aims to prevent child malnutrition by strengthening referral systems and ensuring that malnourished children and those living in food-insecure households identified by health facilities and community health workers can access social relief of distress

Case 17: Nutrition education for early childhood development

Juliana Seleti'

Early Childhood Education (ECE) focuses on the education and early stimulation of young children. One of the critical aspects of ECE is the training of educators and ECD practitioners. Food and nutrition are a major component of all ECE policies, standards and guidelines, based on the understanding that children need to be well-nourished in order to learn. The following is a brief analysis of food and nutrition in ECE-related policy frameworks that inform educator training and early learning programmes.

These policy instruments have helped inform the nutrition content of training programmes from certificate to degree levels, and modules on nutrition, health and safety are an integral part of ECD practitioner training. These policies have also informed the curricula of early learning programmes and the provision of food to young children through the National School Nutrition Programme and ECD subsidy. For example, Ntataise, an ECD resource and training organisation, is using videos to teach practitioners how to incorporate cognitive and social skills during snack time, using food to count, share and learn about food groups.

ECE Policies	Comments on nutrition promotion and action
White Paper 5 on Early Childhood Education[55]	The White Paper promotes an integrated approach to early childhood development (ECD) and acknowledges the importance of supporting children's nutrition by expanding the reach of the Primary School Nutrition Programme to Grade R learners (p. 32) and addressing the health and nutrition requirements of younger children
National Early Learning Development Standards[56]	The standards affirm the importance of "nutritious food" as an essential strategy to enable positive growth and development. (p. 11)
National Curriculum Framework (NCF) for Birth to Four[57]	The NCF identifies nutrition as one of the rights of young children. – together with proper health care and a safe environment. (p21). The curriculum is divided into six early learning and development areas, one of which focuses on "wellbeing" and aims to ensure that children are well-nourished. It includes developmental guidelines for the nutrition of babies, toddlers and young children; a series of age-appropriate learning activities; and broad assessment guidelines to help educators identify children at risk of malnutrition and know when refer them for specialist attention.
Policy on Minimum Requirements for Programmes Leading to Qualifications in Higher Education for Early Childhood Development Educators[58]	The policy highlights the need for ECD Educators to have a sound understanding of nutrition, and identifies 'nutrition, health and wellbeing' as one of the specialized subjects that need to be incorporated into the education and training of ECD educators (p.14)
National Integrated ECD Policy[59]	The NIECD Policy promotes the development of norms and standards for nutrition education, meal planning and training curricula for ECD practitioners for the provision of nutritionally balanced food through ECD programmes.

i Independent consultant

Table 13: Policies and programmes supporting South Africa's provision of nutrition interventions for preschool children

Policy	Current status	Department	Opportunities for improvement
Infant and Young Child Feeding Policy (2013)	• Strong focus on promotion and support for exclusive breastfeeding and complementary feeding, and treatment and rehabilitation of children with severe acute malnutrition. • Little or no mention of older children or obesity • No efforts to address poverty and food insecurity • Updated Policy circulated for comment in 2020 but not yet finalised.	DoH	• Clearer guidance is needed to counsel caregivers around overweight and obesity drawing on the paediatric food based dietary guidelines. • Should include clear guidelines on how to identify children at risk of malnutrition or living in food insecure households and refer them to SASSA and DSD for income support and food relief
Nutrition Guidelines for Early Childhood Development Centres (2016)	• Operational guide on the minimum standards for nutrition in ECD centres including healthy menus • Unsubsidised ECD programmes struggle to meet the requirements due to lack of finances	DoH	• The lack of adequate funding for the ECD sector should be addressed prior to stringent monitoring of these guidelines
Child Support Grant (1998)	• Introduced in 1998, the CSG offers partial income support for children living in poor households. • The R450 cash transfer is paid to primary caregivers who meet the income-means test requirements, subsidising the costs associated with raising a child such as nutrition, transport, and healthcare costs. • Widespread uptake of the CSG resulting in reductions in the child poverty rate over time. • Yet the CSG amount falls below the food poverty line and has failed to reduce the high prevalence of stunting • Vulnerable children remain excluded such as those without birth certificates, and infants	DSD/SASSA	• Address the barriers that exclude young children in poverty from accessing vital income support • Increase the value of the CSG to at least the food poverty line • Introduce regulations and fiscal measures such as taxes and subsidies to make a basket of healthy food more affordable.
Social Relief of Distress (SROD)	• Provides emergency relief to food insecure households by a food voucher, food parcel or cash-in-kind • Only offers temporary relief	DSD/SASSA	• Ensure that children at risk of malnutrition or living in food insecure households can qualify for SROD • Strengthen referrals systems between health facilities, SASSA offices and DSD's Community Food Distribution Centres

from SASSA and food relief from DSD's Community Nutrition Distribution Centres.[42] This kind of child-centred intersectoral collaboration is essential to strengthen referral systems and ensure that vulnerable families and children do not fall through the cracks and should be actively rolled out to other provinces. It is also important to recognise that SROD is intended to provide only temporary relief and fails to address the structural challenges facing poor households.

The current gaps and weaknesses in both the ECD and social protection systems left the most vulnerable children exposed to the ravages of food insecurity during the COVID-19 pandemic.

Impact and responses to COVID-19

During the COVID-19 lockdown, all ECD services were instructed to shut down, putting both the children's nutrition security and the survival of ECD programmes at risk. Food NGOs supporting these facilities were themselves experiencing financial instability, leading to either the short-term or long-term closure of their operations. Furthermore, there were indications that up to 99% of primary caregivers were either unwilling or unable to continue paying fees while ECD programmes remained closed.[30] The knock-on effect of this decision has not only impacted children's nutrition security but has jeopardised ECD operators' livelihoods and left staff unpaid, with concerns that these services will be unable to reopen in the long term.[43] Only 13% of young children were attending ECD centres in July 2020, down from 47% in March, with attendance at the lowest level in 18 years.[43] Even post-lockdown, 68% of centres had not reopened because they could not afford it or could not meet the DSD's safety requirements.[44]

ECD centres in the Western Cape were more fortunate, with approximately 60% of funded ECD centres being tasked by the ECD Directorate to use their existing subsidy allocations to make food parcels for registered children.[v] Technical age-appropriate advice for food parcels was provided, and food relief mapping was conducted. Whilst the provision of food in ECD centres serving economically marginalised communities is normally quite limited, government's decisions to keep ECD centres closed has had a devastating impact on the sector and children's food security.

The closure of the centres not only denied access to direct nutrition support, it also undermined household income. Some 3.4 million women reported they were either unable to work or were finding work difficult due to their child care responsibilities.[44] Three million jobs were lost during lockdown, driving the expanded unemployment rate up from 43% to 53%, with women more adversely affected than men. Most of these jobs still had not been recovered by June 2020, despite the easing of lockdown. Nearly half of all households (47%) reported running out of food during hard lockdown, with reported hunger affecting 22% of adults and 15% of children in May/June. Despite some improvement, rates of hunger and household food insecurity remained high in July/August.[44] Households in rural areas and urban shack dwellers were more adversely affected, with CSG recipients in Langa describing how they were running out of food two weeks into the month and becoming increasingly indebted to loan sharks, with their normal reciprocity networks stretched to breaking point.[45]

While it is hoped that South Africa will recover from the devastating impacts of COVID-19 as a country, the profound effects of poverty, hunger and the closure of ECD programmes on young children will be felt for many years to come.

How can programmes to support optimal nutrition be strengthened?

There are a number of interventions currently in place that could be further strengthened to optimise the nutrition and food security of young children, as outlined in Table 13. There are also a number of cross-cutting priorities to ensure a more supportive policy environment and more effective implementation, especially in disaster settings.

The National Integrated Food and Nutrition Security Plan 2017 – 2030[46] acknowledges many of these gaps and identifies a series of strategic interventions including plans to:

- introduce universal registration of eligible children at public health facilities to improve early access to the CSG
- integrate nutrition education with social protection
- ensure children attending ECD sites receive good quality and quantity of nutritious foods
- improve the nutrition education of community health workers and food handlers in ECD centres
- improve the ability of ECD centres to address malnutrition
- improve coverage of vitamin A supplementation and deworming
- improve the coverage of growth monitoring and promotion and actions to prevent and manage malnutrition
- ensure access to energy and nutrient-dense food supplements for children with moderate and severe acute malnutrition.

The plan also has a strong emphasis on monitoring and evaluation linked to a series of clear process and outcome indicators, together with the introduction of national and provincial coordinating structures to enhance collaboration and drive implementation.

Review the legislative framework to ensure an enabling environment

A key opportunity exists to amend the ECD legislative framework through the Children's Act Amendment Bill, and to review both the funding of ECD programmes and the registration requirements of ECD centres and programmes. As things stand, the minimum requirements intended to protect children's rights and well-being have introduced an arduous compliance process that ultimately excludes many ECD programmes from registration.[47-49] Without the revision of legislation to enable access to funding support and resources from the state, ECD programmes cannot become the public good that the state envisages them to be,[18] and poor children will not benefit from the subsidies they require to support their health and development.

Ensure policy implementation and meeting of targets

The 2015 NIECD Policy[18] outlines a clear commitment to the nutrition, health and development of young children and defines an essential package of ECD services and programmatic priorities. This includes the call to review and strengthen a comprehensive national food and nutrition strategy to eliminate stunting, reduce obesity and prevent hunger and food insecurity in young children. While some progress may have been made with the National Integrated Food and Nutrition Security Plan 2017 – 2030, there are clear gaps in the implementation of nutrition services and support, and the 2020 country profile indicates that South Africa needs to intensify its efforts in tackling the double

v Feedback by the ECD directorate in the Western Cape indicates that approximately 60% of ECD centres in the province were tasked and given approval to use their existing subsidy allocations to make food parcels for registered children.

burden of malnutrition.[50] While it may be possible to catch up growth during the school years and adolescence, emerging evidence suggests that this does not address the cognitive deficits, and that those children who have gained in height still lag academically compared to their peers. Thus early intervention starting in the antenatal period is critical.[51]

Promote intersectoral collaboration to strengthen safety nets for children

Integrated services have been found beneficial and to eradicate malnutrition and stunting requires a collaborative and multi-sectoral approach.[3,52,53] This includes building stronger partnerships between health workers and caregivers, working collaboratively with ECD programmes in implementing initiatives such as the RTHB and Side-by-Side campaign,[19] and strengthening referral pathways between ECD programmes, health facilities and social protection services to strengthen safety nets for vulnerable children and families. This partnership could extend to health workers' active participation in ECD forums, the introduction of WASH capacity-building programmes in ECD centres, monitoring children's nutritional status and providing nutrition education and information on how to prepare affordable, nutritious foods to both the programme operators and primary caregivers. Using ECD programmes as a delivery platform could also help map the needs of young children, track their progress and identify opportunities to strengthen nutrition

Case 18: Mbizana stop stunting campaign 2020

Julika Falconer[i] and Anna-Marie Müller[ii]

The Zero2Five Trust provides nutritional and educational support to children attending more than 400 under-resourced early childhood development (ECD) centres in vulnerable, mostly rural communities in KwaZulu-Natal and the Eastern Cape. Zero2Five also provides education and training for ECD practitioners and assists centres to register with the Department of Social Development (DSD) and apply for the ECD subsidy.

In early 2020, Zero2Five expanded its work to the Mbizana Local Municipality in the Eastern Cape through a partnership with Impande SA, adding 168 ECD centres to their programme. Zero2Five rolled out a large-scale nutrition programme reaching 4,000 children with a daily nutrient-dense breakfast and three rice/soy meals per week at their centres. To track the impact of the project on child nutrition status, the team collected anthropometric measurements of 159 children across five selected centres in February and March 2020. The results suggest a double burden of malnutrition in these communities: 23% of children suffer from stunting, with overweight and obesity found in 12% of the children.

Following the announcement of school closures and the lockdown in March 2020, the Zero2Five team distributed a month's supply of fortified porridge (2 kg per child) to all ECD centres just before the hard lockdown started. Their agility and ability to collaborate enabled them to continue providing nutritional support throughout lockdown. Between April and July, the Port Edward Build-It and Bizana SPAR served as distribution points and Zero2Five organised stock to reach the provincial border. From there, Impande's field team delivered a total of 3,000 bars of soap and 9 tons of food every month to the 168 centres for further distribution to 4,000 children and their families spread out over 2,500 km². This impressive effort from the team required working long hours to impact the poverty in households. As for many civil society organisations, the pandemic demanded that Zero2Five adapt to implement disaster relief efforts. Since August 2020, the team has supported ECD centres to re-open and delivered its usual nutritional support. The team is also implementing more water, sanitation and hygiene (WASH) components in the ECD programme.

Zero2Five's core operation is providing nutritional support to children attending ECD centres, but their value extends to relationships with local primary health facilities. By conducting anthropometric measures of children in the ECD centres, they can identify and refer children at risk of malnutrition. Over time, they hope to demonstrate how ECD practitioners, community health workers and local clinics can work together to improve child nutrition in their communities. Although children not attending ECD centres may still fall through the cracks, establishing such mechanisms is vital for effective community-based management of malnutrition. As the full impact of the lockdown on children's nutritional status is realised in the coming months, nutrition surveillance will be a useful tool to inform responses. This well-oiled intervention serves the children of Mbizana well.

i Zero2Five Trust
ii Grow Great

support for those children not attending ECD programmes. Ultimately, by responding proactively to early signs of growth faltering, malnourished children in ECD centres and home-based programmes can be treated.

Provide adequate funding

Given the high levels of poverty and unemployment, it is essential to increase the value of the CSG to above the food poverty line,[23] improve access to the ECD subsidy and enable all CSG beneficiaries to qualify for the ECD subsidy automatically. Funding for the most disadvantaged communities must remain a priority and should be mandatory in the Children's Amendment Bill. These investments in social protection need to be supplemented with food provision from the private sector and civil society to improve the food security and dietary diversity of young children attending ECD centres and community-based programmes. These safety nets also need to extend to the families of young children not attending ECD programmes. The NIECD Policy sets out guidance for the funding of ECD programmes to enable equitable access for the most vulnerable young children and families, in a manner that ensures that ECD programmes are state-supported and funded through multiple partners. Yet these guidelines have not been prioritised.

Prioritise child hunger in disaster settings

The child hunger crisis during the COVID-19 lockdown period was exacerbated by the closure of schools and ECD programmes, forcing many young children and their families to queue for food relief. It is, therefore, critical to develop child-centred response plans and practical guidelines to ensure that the nutritional needs of young children are adequately addressed and prioritised in disaster management and humanitarian efforts. This includes harnessing community healthcare services and ECD sites as platforms to identify vulnerable children and channel food relief efforts as demonstrated by Case 18.

Conclusion

Interventions that promote, protect and support the nutrition and food security of preschool children must be prioritised during this critical and time-sensitive period of development if South Africa's children are to thrive and reach their full physical, cognitive, social and economic potential. Healthcare and ECD practitioners can play an essential role in identifying children and families in need of care and support and can facilitate preventative and responsive care. Nutrition is rooted in the South African Constitution as a fundamental human right.[54] For this to be fully realised, policies and programmes must be inclusive and prioritise the most vulnerable children. Improving early access to birth registration and the CSG, and relaxing the current registration requirements for ECD programmes, will help make young children more visible and strengthen the delivery of nutrition and health interventions through ECD and community-based programmes that will contribute to the nutrition, education and health of all children.

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Food and nutrition security in schools: Threats and opportunities for intervention

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The school years represent a period of rapid growth and development. They provide an opportunity to address shortfalls and consolidate gains made during early childhood and to support a healthy transition to adulthood. Children are also future parents, and their health and nutritional status will impact the future generation of children (see chapter 4 and the importance of nutrition in the antenatal period and even preconception). The adolescent growth spurt is associated with an increase in appetite. School-aged children and adolescents need more nutrients than adults because they gain at least 40% of their adult weight and 15% of their adult height during this period. Inadequate dietary intake during this period can compromise cognitive development, delay sexual development and slow linear growth.[1]

Emerging evidence from a global Lancet review[1] indicates that a high proportion of South African school-age children are stunted (short for age) and/or overweight and obese, and that children's nutritional status appears to be deteriorating during their school years.[2] This suggests that school-aged children and adolescents are unable to access sufficient nutritious food to support their linear growth and physical development, and that their consumption of cheap snacks and sugar-sweetened beverages is helping to fuel excessive weight-gain, especially amongst adolescent girls.

Adolescent obesity is a public health concern due to its association with adult non-communicable diseases.[3] It is therefore imperative to invest in nutrition-related interventions for school-age children and adolescents to optimise the health, development and education outcomes of this important target group and prepare for a healthy and productive next generation of children.[4] The transition to school also marks a period of increasing autonomy where school-children and adolescents start to make independent choices about food and exercise, and where adult patterns of behaviour become established.[5] Schools, therefore, provide an ideal platform for health-promoting activities to improve the nutritional status of youth, with 98% of South Africa's school-aged children attending school.[6]

This chapter examines the following questions:

- What is the nutritional status of South Africa's children and adolescents?
- What are the socio-economic, biological and cultural drivers of under- and overnutrition?
- Which interventions have the potential to improve the nutritional status of school-age children?

What is the nutritional status of South Africa's children and adolescents?

School-age children account for more than a quarter of the South African population, with approximately 15.8 million children aged 5 – 19-years-old.[7] The results of recent national South African studies reflect a persistent double burden of malnutrition,[8-13] with an unacceptably high prevalence of underweight, stunting and overweight among school-age children (Figure 22). Most indicators of undernutrition remained relatively stable or decreased, yet overweight and obesity increased between 1999 and 2016, especially amongst adolescent girls. [8, 10, 11] From 1975 to 2016, the global age-standardised prevalence of obesity in children aged 5 – 19 years old increased from 0.7% to 5.6% in girls, and from 0.9% to 7.8% in boys, and the proportional increase was greatest in southern Africa. [14] The Global Burden of Disease Study showed that overweight and obesity among South African boys aged 2 – 19 -years-old remained fairly stable between 1980 and 2015. Yet rates were higher and increased dramatically among girls of the same age.[15]

Dietary practices of school-age children

Inadequate intake of vegetables and fruit and the frequent consumption of unhealthy snacks, high in sugar, fats or salt, and sugary drinks increase the risk for micronutrient deficiencies. In general, iron and vitamin A status appear to

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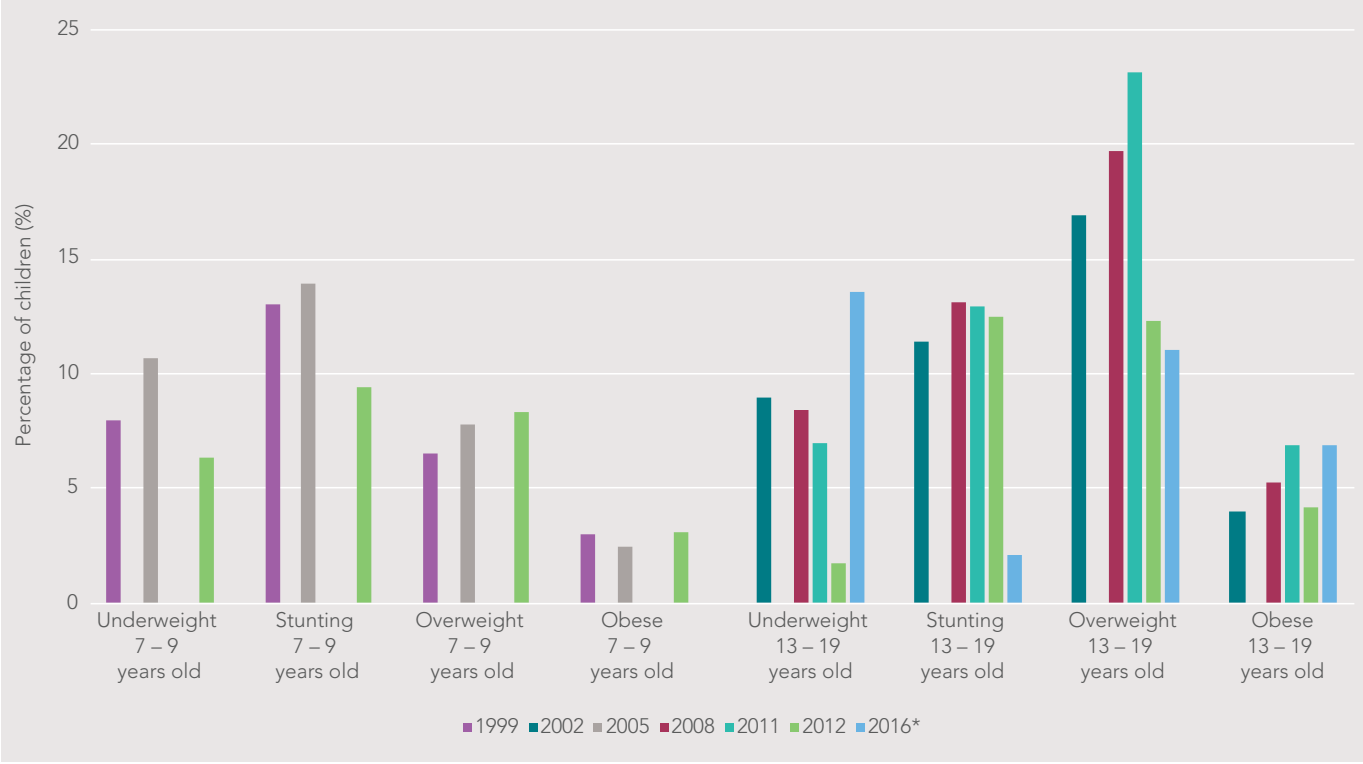
have improved over recent years, but limited data indicate that the prevalence of zinc deficiency is still high in South African children from low-income communities.[5, 11, 12, 16, 17] According to a national study, one-third of the adolescents ate micronutrient-poor, salty snacks daily, while vegetable and fruit intakes were generally low and lowest in poor households. These findings are an indication of nutrition insecurity and poor micronutrient status.[18] The Birth-to-20 cohort study tracked the dietary habits of a large group of urban adolescents in Soweto-Johannesburg over four years and showed irregular breakfast consumption, infrequent family meals and frequent consumption of fast foods, sugar-sweetened beverages and energy-dense school tuckshop items.[19] These poor dietary habits were also reflected in the results of the 2011 Youth Risk Behaviour Survey.[10] Although adolescents from wealthier households were more likely to have higher vegetable and fruit intakes, they also had higher intakes of energy-dense snacks and were more likely to be obese.[19] Risk behaviour – such as excessive alcohol intake, smoking, risky sexual behaviour and adolescent pregnancy – further contribute to poor health and nutrition insecurity among South African adolescents.[20]

What are the socio-economic, biological and cultural drivers of under- and overnutrition?

Poverty and food insecurity

Individual food choices are also constrained in powerful ways by household income, rising food prices and an obesogenic food environment, with many children growing up in households and communities where healthy foods are unavailable or unaffordable. Data from four national

Figure 22: Anthropometric nutritional status of South African school-age children, 1999 – 2016



Notes: *SADHS 2016 used adult cut-points, other studies used age-specific cut-points

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surveys since 1999 indicate that household food security has improved. However, according to the 2017 South African Food Security report, 30% of households with three or more children had inadequate access to food and another 8% had severely inadequate access to food. Households with school-age children are less likely to experience hunger and inadequate access to food than households with pre-school children.[11, 21] Nutrition security is at risk even in many food secure households, due to inadequate intake of nutrient-rich foods, particularly vegetables, fruit and animal source foods.[11] The South African Demographic and Health Survey 2016 found that 35% of household members received at least one grant, with the Child Support Grant the most common type of social assistance (24%). Yet 29% of the poorest households still reported problems in satisfying children's food needs.[18]

Despite South Africa being a food secure country, household food and nutrition security have deteriorated during 2020 due to the COVID-19 pandemic. During the early phase of the pandemic in April 2020, 24% of respondents to a national survey reported that they had no money to buy food (55% of informal settlement residents and about two-thirds of residents from townships).[22] School-age children were particularly vulnerable since around nine million South African children did not have access to the daily meals from the National School Nutrition Programme (NSNP) while schools were closed. In July, Equal Education and two Limpopo schools successfully launched an urgent court application against the government to reinstate the NSNP to meet their children's basic nutritional needs (see Case 21).[23] Food relief from the government, non-governmental organisations (NGOs) and the private sector has not been sufficient to meet the demand and reported hunger levels have increased. [24]

Socio-demographic drivers of obesity

Overweight and obesity is a public health concern in South Africa, and the prevalence increased dramatically in adolescent girls over the past decades. The 2011 Youth Risk Behaviour Survey reported that 25% of girls and 22% of boys aged 13 – 19-years-old were overweight, while 8% of girls and 6% of boys were obese.[10] Overweight and obesity were higher in urban areas and are indicative of their sedentary lifestyle and exposure to high energy diets.[19] Gender differences in overweight and obesity exist, with girls being more at risk of overweight and obesity than boys. [25]

These gender differences are shaped by both biological differences and cultural norms.[26] Biological differences in obesity between males and females are evident in the patterning of body fat and total body fat levels.[27] South African girls have a higher fat mass, distinctive fat distribution and lower insulin sensitivity than boys,[28] while boys are more physically active than girls and their body composition benefits more from physical activity. [16] Boys also have lower serum leptin levels and are protected from the genetic effects of some obesity-related gene variants.[27]

Exposure to an unfavourable environment either *in utero* or in the early postnatal period can also have a profound effect on growth and development, increasing an individual's risk of developing adult diseases.[29] For example, smoking during pregnancy is associated with low birth weight, which increases the risk of obesity in adulthood.[30]

Overweight and obesity are also shaped by socio-cultural determinants such as body image.[31] A South African study aimed at assessing beliefs about body size and body image in girls aged 10 – 18-years-old reported that two-thirds of girls associated a large body size with happiness and wealth, and associated a smaller body size with ill-health and disease.[32] Similarly, a study in rural South Africa found that approximately 84% of adolescent girls (11 – 15-years-old) were not happy with their body size and that girls who desired to be fatter had a significantly higher body mass index (BMI) than the girls who wanted to be thinner.[33] These studies show how body image perception in adolescence may be distorted. Therefore, the importance of a healthy body size and the association between body size and certain diseases or conditions should be communicated to children and their parents.

Food choices are also constrained by children's socio-economic status, with studies showing that children in low-income households had limited access to nutritious foods and that high-income households could afford healthy foods and therefore their children's diets were more diverse.[19, 34]

The marketing of obesogenic food to school-age children

The marketing, sale and consumption of foods that are high in fat and sugar-sweetened beverages appear to be driving the obesity epidemic and have adverse effects on the iron and vitamin A status of children. Research shows that marketing practices focus mainly on foods high in fat, sugar and salt, and non-alcoholic beverages. Such marketing has an impact on children's food choice and purchasing behaviour, understanding of nutrition, appreciation of certain foods, and consumption.[35] The marketing efforts of big food companies and retail stores are focused on fast foods, sweetened breakfast cereals, confectionery and soft drinks,[35] and contribute to the development and maintenance of an obesogenic environment.

Children and adolescents are targeted and exposed to food advertising through various marketing platforms including television, radio, product placement in stores, viral marketing, posters, sponsorships to schools and in-school marketing, product packaging, product design, free samples, tokens, competitions, clubs and loyalty programmes, the use of licensed and cartoon characters, point of sale positioning, magazines, newspapers and the internet.[35] Such marketing results in a high level of exposure to unhealthy foods. Therefore policies to regulate the marketing of unhealthy food to children need to address a wide array of marketing strategies, including billboards advertising beverage companies inside school premises.[25]

Which interventions have the potential to improve the nutritional status of school-age children?

Addressing these complex challenges requires a "whole-school approach" of interventions both within and outside of schools to create an enabling environment.

Promising practices include:

- regulating the marketing and sale of unhealthy foods to children in and around schools,
- educating children about nutrition and healthy lifestyles,

Case 19: Addressing the threat of alcohol to child and adolescent development – a growing imperative

Nadine Harker Burnhams & Charles Parry[i]

South Africa has one of the highest rates of fetal alcohol spectrum disorder (FASD), and it is the leading risk factor for death and disability for youth (15 – 19 years) globally.[60, 61] This is in keeping with the most recent findings from the 2016 South African Demographic and Health Survey where one in every four youth (15 – 19) reported using alcohol.[62] Drinking often starts even earlier, and the National 2011 Youth Risk Behaviour Survey (YRBS) found that 12% of grade 8-11 learners had used alcohol before 13 years of age with high levels of binge drinking.[10] A separate multi-focused intervention study found hazardous levels of alcohol use by 27% of adolescent girls and young women (aged 10 – 24 years).[63]

Direct and indirect consequences of drinking among children and adolescents in South Africa include unintentional and intentional injury, interpersonal violence, rape, unwanted pregnancies, sexually transmitted infections, HIV, poor educational outcomes (absenteeism, school failure and dropout) and FASD.[63] Drinking during pregnancy can damage the unborn child, and rates of FASD in South Africa have been found to be among the highest in the world affecting 17% to 23% of children in certain mainly rural communities.[64]

Escalating levels of alcohol use and increases in consumption among young people are strongly linked to a host of bio-psycho-social factors, and can also be attributed to increased access to alcohol beverages, increased affordability, and aggressive marketing targeting this vulnerable group.[63] Additionally, the cost of alcohol reduces the amount of money available to buy food and in so doing reduces the availability of food for children in that household. Research in Poland has shown that children coming from families who have a parent with alcohol addiction had a lower BMI and were shorter than other children of the same age.[65] The South African government has attempted to address these problems by proposing to ban the advertising of alcohol, raise the legal drinking age, limit hours for alcohol sales, and lower the legal alcohol limit for drivers, but most of this legislation has not been enacted.

Opportunities for intervention

There is a lot more the government could and should be doing at multiple levels to reduce use of alcohol by young people. Universal interventions include:

- scaling up programmes to strengthen parenting skills, build resilience and self-efficacy from the first 1,000 days of life through to adolescence;
- banning packaging that appeals to young people;
- increasing excise taxes on products that appeal to young people such as fruit-flavoured alcoholic drinks;
- instituting minimum unit pricing;
- dealing firmly with venues that sell alcohol to underage drinkers; and
- instituting a graduated driving license policy so that novice drivers may not test positive when driving under the influence of alcohol for a number of years.[66-68]

Targeted interventions include:

- accrediting school-based prevention programmes to improve quality; and
- providing appropriate and quality treatment programmes, including screening, brief interventions and referral to treatment services for young people.

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Figure 23: Interventions with the potential to improve the nutritional status of school-age children: A whole-school approach

- improving the quality of food supplied by the National School Nutrition Programme,
- creating incentives to provide more healthy foods through school tuckshops and lunchboxes,
- using school food gardens to improve dietary diversity, provide income generation opportunities and educate learners about healthy diets and food production
- providing school health services including vitamin A supplements and deworming
- improving water, sanitation and hygiene to prevent infections
- creating a safe and supportive school environment that promotes physical activity.

Regulating the marketing of unhealthy foods to children

Marketing of unhealthy products to children continues despite policies developed to safeguard children from manipulation by big companies in the food industry. Such policies include a set of recommendations on the marketing of foods and non-alcoholic beverages to children endorsed by the World Health Assembly in 2010,[36] which aimed to limit the marketing of foods high in saturated fats, trans-fatty acids, free sugars, or salt to children. In 2014, the Department of Health tabled draft regulation R429 relating to the Labelling and Advertising of Foodstuffs, which aimed to prohibit the commercial marketing of food or non-alcoholic beverage to children unless it complies with a set of criteria (see Guideline 14).[37] This included limiting advertising in places where children are likely to gather, such as crèches, schools, and sports events. Yet, South Africa has still not legislated R429 or developed a monitoring and enforcement framework for implementation (see Case 7).

Advertising and selling of unhealthy foods in and around schools is associated with poor diet quality, overweight

and obesity among learners.[38] It is therefore essential to scrutinise the marketing and sale of unhealthy foods in and around schools. Currently, South Africa does not have a set of guidelines or policies governing the marketing and sale of unhealthy foods in and around schools. Yet school policies and national regulations can play a vital role in curbing the problem of overweight and obesity in young people.[39] Such policies could include banning vending machines that sell unhealthy food options, banning the school signage that is sponsored by big food cooperates, prohibiting unhealthy food sales in school tuck shops and areas around the school, and encouraging the selling of fruit and other healthy foods. In addition, a monitoring process would need to be put in place to strengthen adherence to these policies. It is also necessary to improve the food environment in the home, school and wider community to enable school-aged children and adolescents to make healthy food choices.

Nutrition education and health promotion

School-based health education creates an opportunity to impart knowledge and skills and develop positive attitudes and self-efficacy that will shape children's behaviours into adulthood. Adolescence is a period of exploration, dynamic and complex. Therefore, health promotion messages intended for adolescents need to cater for their needs and address misconceptions about health. The Life Orientation syllabus in South African schools covers numerous health topics, including nutrition.[40]

Health and nutrition messages delivered to children and adolescents should be appealing but clear to avoid mistrust and confusion. In other words, behaviour change communication goes beyond delivering knowledge; it is an interactive intervention that requires the strategic use of communication to promote positive health outcomes based on proven theories and models of behaviour change.[41] Yet this method of communicating health information has not been applied widely to school-based health communication and teachers' nutrition knowledge is suboptimal.[42]

The Curriculum and Assessment Policy Statement (CAPS) includes nutrition and related health information predominantly in Life Orientation. Some information is included in Natural Sciences (Grade 6) and Consumer Studies and Hospitality Studies in the Further Education and Training (FET) band (grades 10 – 12). CAPS does not specify the content of the nutrition information, merely the outline. Those who develop the Teacher and Learner Support Materials often use their own knowledge of nutrition, which may be inaccurate, irrelevant or incomplete.

School health services

The 12 to 13 years that most children spend in school provide an ideal opportunity for health interventions to address the many health and socio-economic challenges that affect children's nutritional status. The Integrated School Health Policy (ISHP) therefore focuses on learners' immediate health problems and interventions to promote their physical, mental and social well-being.[43] School health services initially focussed on services to learners in the most disadvantaged schools but will be extended to all schools over time.

Basic components of the school health programme include a healthy physical environment, safe water and sanitation, skills-based health education and school-based health and nutrition services. Topics covered in the Life Orientation curriculum should be supplemented through co-curricular activities focusing on nutrition, physical activity, hygiene, chronic diseases, physical and emotional abuse, sexual health, teenage pregnancy, HIV and mental health. School health services are currently delivered by a limited number of School Health Nurses, who aim to assess each learner once during each of the four educational phases, with an emphasis on Grade 1 and Grade 8 learners. This includes an assessment of the vision, speech and hearing, growth, gross locomotor function, oral health, chronic illness and basic mental health of all foundation phase learners. This is followed by an anthropometric assessment and vision, oral health, chronic illness and mental health screening of learners in the senior phase and FET band. On-site services at schools should include deworming, immunisation (if needed), treatment of minor ailments, reproductive health services, nutrition assessment and environmental assessments (such as water, sanitation and safe waste disposal). These services may be supplemented by NGOs or by professional societies on a voluntary basis. The Department of Social Development should assist learners and their families to access social assistance to overcome financial barriers and relieve hunger, while the Department of Basic Education (DBE) plays a key role in creating an enabling environment for the ISHP.[43]

School health services provide a safety net for children without access to preventive health services and an opportunity to identify and intervene early to address avoidable health and nutrition problems.[43] Yet coverage remains suboptimal, with only 33% of Grade 1 learners and 22% of Grade 8 learners screened in 2017/18.[44] Challenges include a shortage of staff and equipment and a lack of referral and follow-up systems.[43] A study in the City of Tshwane revealed widespread non-compliance with the ISHP and lack of stakeholder collaboration. This fragmented

and unsustainable approach to the execution of the ISHP programme could result in delayed identification of children who need health interventions.[45]

School feeding programmes

The National School Nutrition Programme (NSNP) is a poverty alleviation strategy that aims to deliver a daily nutritious meal, providing at least 30% of the recommended dietary allowance (RDA) for children over the age of 4 years to learners attending quintile 1, 2 and 3 schools. An analysis of menus from schools in the Eastern Cape showed that this target is not achieved, with typical meals only providing about 16% of the daily energy requirement. This is more a snack than a meal.[46] Secondary aims are to improve access to education and enhance learning capacity. Where it is implemented, the programme has been shown to improve punctuality, regular school attendance, concentration and the general well-being of participating learners.

School feeding is a powerful tool to alleviate short-term hunger and enhance children's learning capacities. It also provides an incentive for parents to send or keep children at school, particularly girls.[47] The 2018 General Household Survey revealed that 77% of learners who attended public schools in 2017 benefitted from school feeding schemes.[21]

The 2016 evaluation of the NSNP did not assess the programme's impact on children's school attendance, performance or nutritional status. Challenges reported by district officials included limited staff to prepare and serve the food, high staff turnover of those preparing the food, limited transport for food to the schools and an inability to serve food from three food groups every day.[48] There have been few evaluations of the NSNP's impact on micronutrient deficiencies. However, the Department of Planning, Monitoring and Evaluation has commissioned a series of evaluations to review different dimensions of the programme and its administration. The NGO Feed, Uplift, Educate, Love (FUEL) investigated the processes of food delivery in the NSNP and worked with North-West Province provincial government to improve the procurement and delivery of food in selected schools. Initially, they found that their efforts were unsuccessful because stakeholders at school-level were not involved. They then involved local fieldworkers in developing a monitoring, reporting and responding (MRR) tool, which allowed fieldworkers to monitor the quantities of food delivered and assess whether schools were serving nutritious meals on time. The MRR methodology was rolled out in other provinces between 2011 and 2017, and progress has been made in serving timely, nutritious meals in most provinces.[49]

Employment of food handlers through the NSNP

The NSNP provides an important source of income for women who have children in public schools in quintiles 1 – 3. The 2016 evaluation of the NSNP revealed that over 50,000 food handlers prepared food for the NSNP, earning a stipend of R1,400 per month. This arrangement benefits community members and stimulates economic activity. These food handlers, who are mostly women, are supposed to be provided with training in food safety and hygiene, preparation and serving. They can then potentially use these skills to access further employment or set up small businesses after completing their 24-month contract with the schools. But there is no evidence that this training has been successfully implemented in most schools, and observation in the Eastern Cape reveals that vegetables such as cabbage are cooked long before the mealtime and incidents of severe food poisoning.[46]

Water, sanitation and food safety

The provision of sanitation and clean water for drinking and handwashing is vital to prevent the spread of diseases and ensure effective hygiene practices in both the school and home environments. Hygiene behaviours are developed and reinforced during the school years and depend on the availability of clean water and sanitation facilities.[50] A child-centred analysis of the 2018 General Household Survey showed that 30% of children live in households without access to piped water on site, and 21% live in households without adequate sanitation.[51] In the 2011 Youth Behaviour Risk Survey, 62.1% of learners reported always washing their hands before eating, while 71.5% of learners reported always washing their hands after going to the toilet.[10] Yet the COVID-19 pandemic revealed significant gaps in the provision of water and sanitation at schools.

The NSNP provides guidelines on the basics of personal hygiene, food hygiene, food preparation, managing food waste and preventing food poisoning.[52] Yet the recent evaluation of the NSNP showed that almost half of the volunteers had not received training on kitchen hygiene, food safety and pest control.[48]

School food gardens

A review of school garden programmes over the past thirty years indicates that school gardens have the potential to improve dietary diversity and food security, provide income generation opportunities and educate learners about healthy diets and food production.[47] In a population where vitamin A deficiency is still reported in some vulnerable groups, school gardens play an important role in providing dark-green leafy

Case 20: The National School Nutrition Programme court case

Mbonisi Nyathi and Paula Proudlock[i]

On 17 July 2020, the North Gauteng High Court handed down judgement in *Equal Education and Others v Minister of Basic Education and Others*, in which the Department of Basic Education (DBE) was ordered to resume the National School Nutrition Programme (NSNP) for all qualifying learners, regardless of whether or not they had resumed classes.[74]

Parties in the litigation

The applicants, Equal Education (EE) and the school governing bodies (SGBs) of two public schools in Limpopo, sought an order directing the Minister of Basic Education and the MECs of Basic Education of eight provinces (the respondents) to resume the NSNP and requested the court to issue a supervisory interdict to ensure compliance. The applicants also sought an order declaring that the respondents were in breach of their constitutional and statutory duty to ensure that the NSNP provided a daily meal to all qualifying learners whether they were attending school or studying away from home as a result of the COVID-19 pandemic.[75] The Children's Institute, represented by the Centre for Child Law, was admitted as amicus curiae.[76]

The issues before the court

The first issue before the Court was whether the applicants had set up a factual foundation for the remedy they sought because the respondents contended that they never refused to implement the NSNP. The DBE argued that the supervisory interdict sought by the applicants was inappropriate in these circumstances. The DBE also argued that their constitutional duty to provide basic education did not include the duty to provide basic nutrition.[77]

The Court found that the applicants had successfully set out the factual basis of their case that respondents had failed to roll out the NSNP, and that the Minister and MECs had not complied with their constitutional and statutory duties. Therefore the Court rejected the respondents' defence as semantic, bad in law and contrived.[78]

The impact of COVID-19

The Court held that the NSNP was a lifesaving programme for the poorest children that provided at least one nutritious meal a day to learners while they are being educated.[79] The NSNP is a feeding scheme that feeds approximately 9.6 million poor learners in South African public schools. The court relied on a report by Jeremy Seekings to highlight the impact of the closure of schools and the suspension of the NSNP during the COVID-19 lockdown period.[80]

The Court noted from the Seekings report that for all the measures that were announced by the government to mitigate the loss of employment and income and the suffering due to lockdown, there was no viable substitute for the NSNP for children.[81] Furthermore, children without identity numbers were not benefiting from the increase to Child Support Grant and were excluded from the food parcels programmes.[82] The report noted that the social grant relief package had failed to alleviate the plight of all poor people. Millions of people who were in informal employment had received no income or grants and could not meet their families' basic needs and expenses. The suspension of the NSNP had a devastating effect on the distribution of food to poor children, and the Court noted that less food was being distributed during the lockdown than before the lockdown. This meant that children in poor households faced the risk of malnutrition with possible long-term damage to their health.[83]

The affidavits submitted by the applicants painted a painful scenario that many children in the country found themselves in. It supported the narrative that the NSNP ensures at least one meal a day for learners who do not get regular meals at home, enabling them to concentrate and learn and receive basic nutrition. The children were unable to concentrate on schoolwork due to low levels of energy and the general anxiety caused by food insecurity.

When some learners were allowed access to the NSNP due to the phased reopening of schools, this caused further distress as those who were able to access food felt guilty for eating while their siblings at home did not receive a meal. The learners expressed their frustration, stress and lack of concentration as a result of the food insecurity. Some said that they had just given up on studying. As noted by the Court, the affidavits showed that "hunger is not a problem, hunger is an obscenity."[84]

The evidence submitted by the amicus curiae, the Children's Institute, revealed that 30% of the South African population experiences severe levels of food insecurity

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– a far higher rate than the global average or even the average for Africa. High levels of unemployment lead to poverty and food insecurity, and even when employed, income is often inadequate. Five million people are employed in the informal sector who in turn support 16 million people. This means that caregivers are not able to provide sufficient food and basic nutrition to their children. Even prior to lockdown, about 11.6 million children already lived in households below the upper bound poverty line.[85] The amicus submitted that the NSNP was well targeted to children who are poor and food insecure. The NSNP also delivers micronutrients because it includes protein, vegetables and fruit. The NSNP is essential for school children because it is well-established that well-nourished school children learn better.[86]

The suspension of the NSNP infringed on the children's right to basic nutrition

The Court accepted that the suspension of the NSNP had a devastating effect on over nine million learners. A reliable source of food and nutrition came to an end overnight. To demonstrate that the respondent had a duty to resume the NSNP, the applicants relied on sections 29(1)(a) (the right to basic education) and section 28(1)(c) (children's right to basic nutrition), read with section 27(1)(b) (the right to have access to food) of the South African Constitution.[87]

The applicants contended that the right to basic education includes the provision of the NSNP and that its continued suspension constituted a failure on the part of the DBE to fulfil their constitutional duties. To support this argument, the applicants and the amicus directed the Court to the government's actions and policy documents which demonstrated that the provision of nutrition is integral to the right to basic education.[88]

On the other hand, the respondents argued that the NSNP was just a welcome addition to their duty in terms of the right to basic education.[89] The Court rejected this argument, referencing the Department's own documents.[90] The Court held that the Minister of Basic Education and the MECs have a constitutional and statutory duty to provide basic nutrition in terms of section 29(1)(a) of the Constitution.[91]

Furthermore, the Court held that the right to basic nutrition, like the right to basic education, is unqualified; that is, there is no internal qualifier making the right subject to available resources or progressive realisation. The right can therefore only be limited in terms of the general limitation clause in section 36 of the Constitution.[92] The Court further held that in addition to the government's positive obligations to fulfil the rights contained in the Bill of Rights, the government also has negative obligations not to impair access to rights in the Constitution.[93]

The Court held that learners are entitled to receive the basic nutrition they have always received in terms of the NSNP. When the state suspended the NSNP, it essentially infringed the learners' right to nutrition and education.[94] In passing, the Court observed that there was no compelling justification for the Minister and MECs to suspend the NSNP,[95] especially since the funds for the programme were readily available.

Conclusion

The applicants were successful in proving that the Minister and the MECs had failed to comply with their constitutional and statutory duties.[96] The court issued a declaratory order stating that all qualifying learners are entitled to the NSNP, whether or not schools have reopened. The government is constitutionally obliged to ensure learners have access to the NSNP and the DBE was placed under judicial supervision to ensure compliance.[97]

The case clarifies that the government has the constitutional duty to provide learners with the NSNP as part of the right to basic nutrition and education. The judgment affirms children's socio-economic rights and will have a tangible effect in alleviating the hunger felt by so many children in South Africa. As the Court remarked, "hunger is not an issue of charity, but one of justice". In this case, justice has prevailed.

and orange vegetables and preventing clinical symptoms that affect school performance and compromise the immune system.[53] With improved access, availability and intake of fresh produce, school children are less likely to consume high amounts of processed, energy-dense and nutrient-poor foods that increase their risk of unhealthy weight gain and the long-term risk of non-communicable diseases.[47] School gardens on their own cannot address food and nutrition security. But if planned and implemented with the support of parents and the community, they can complement school feeding programmes and enhance their long-term impact on children's nutritional status and learning achievements.[47, 54]

The NSNP, therefore, encourages schools to establish gardens[52] from which they can obtain fresh vegetables and fruit to supplement the menu provided by DBE in line with the South African Food-Based Dietary Guidelines. While the promotion of micronutrient-rich vegetables and fruits in school, home and community gardens helps diversify the local food base, it is generally not possible for a school garden to generate much of the staple food required for a school feeding programme.[47]

Learners, teachers and parents are also provided with skills to grow their own food, contributing towards long-term household food security and providing micronutrients. In a cross-sectional survey of schools across South Africa, 77% of learners indicated that their school has a food garden, while

Case 21: Malnutrition and physical activity amongst South African children and adolescents

Catherine Draper[i]

Physical activity has numerous proven benefits for the growth, development, and physical and mental health of children and adolescents. Research, from predominantly high-income countries, shows that it helps prevent obesity. However, in South Africa, the relationship with nutrition status is more complex due to the double burden of overnutrition (overweight/obesity) and undernutrition in South African children. It is therefore necessary to consider physical activity in relation to both over- and undernutrition. Evidence from urban and rural settings in South Africa suggests that both forms of malnutrition are associated with lower levels of physical activity in younger children, especially when they are at preschool.[69-71]

Given this complex relationship, it is important to consider the nutrition status of children when making recommendations about increasing physical activity levels. In low-income (and often food-insecure) settings where children might have little excess energy available, it may not be wise to promote physical activities that dramatically increase energy expenditure (e.g. running around for extended periods). For younger children especially, this may compromise or displace energy available for brain development; for older children and adolescents, this could compromise their ability to focus on their schoolwork. For children and adolescents in these circumstances, less energy-demanding activities (e.g. climbing, games that involve walking, or running only for short periods of time) would be more appropriate and could yield many of the psychosocial and cognitive benefits of physical activity, without overburdening their already scarce energy supply due to food insecurity and/or a poor quality diet.[72]

Another key consideration in low-income settings is the need to create enabling environments to support children and adolescents' physical activity. In South Africa, there is often space for children and adolescents to be physically active, but the environment is not necessarily safe, nor is it particularly supportive. In preschools, children may not be provided with opportunities for the kinds of physical activity that promotes cognitive and physical development (e.g. if they are just allowed to run around outside, unsupervised). While quality can be enhanced by equipment and facilities, these are not prerequisites. Engaged, motivated and resourceful preschool teachers can create these quality opportunities with simple, but fun activities.

The Healthy Active Kids South Africa (HAKSA) 2018 Report Card[73] highlighted similar problems at primary and high schools including the consistently poor implementation of physical education in the curriculum (through Life Orientation); limited implementation of the National School Sport Programme; low levels of participation in organised sport; and safety concerns that affect many children who walk to school, even though walking to school is a good way for children and adolescents to be physically active. Furthermore, only about half of school-aged children are meeting the recommended 60 minutes of moderate- to vigorous-intensity physical activity (that increases heart rate and makes you breathe harder and sweat). Those who are more active tend to be a healthier weight, have a better quality of life, and less likely to use tobacco and marijuana. Added to this, only a third of children meet screen time recommendations (< 2 hours of recreational screen time per day).

The HAKSA 2018 Report Card[73] identified two key strategies for creating a more enabling environment 1) providing safe spaces for physical activity, particularly at a community level, and for children walking or cycling to school; and 2) improving the implementation of policies to promote a healthy school culture and environment, and opportunities for physical activity, especially physical education and sport.

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68% indicated that their families also grow vegetables and/or fruit.[52]

Translating the vision of school gardens into a sustainable school garden programme can be challenging. A shortage of water is reported to be a major constraint for the development and maintenance of school gardens, particularly in semi-arid areas where the development of simple irrigation systems (water points, roof catchments) needs to be considered. Thus, container-based cultivation and hydroponics may be helpful in urban areas where available land is limited.[47]

The availability of technical skills to support school gardens also needs to be considered. The charging of (usually over-burdened) teachers with extra training and supervisory responsibilities needs to be weighed up against the possibility of involving the community and NGOs. Public-private partnerships, including sponsorship by firms, need to be explored. One option would be to engage NGOs to link school and community gardens and draw on their expertise in managing gardens efficiently, which would reduce the workload of teachers and the need to train teachers in gardening.[47]

Developing a sustainable school garden programme requires strong political commitment at a national level, a robust institutional framework and the active participation of all stakeholders - from the ministries of agriculture, education and health, through to teachers, learners, parents, school administrations with the support of funding agencies and NGOs.[47] Governments should therefore have a clear vision of how school garden initiatives fit into the country's overall educational and food and nutrition security strategy and put the necessary resources in place to ensure their financial, physical and pedagogical sustainability.[47]

Physical activity

The health benefits of regular physical activity (PA) and exercise have been widely acknowledged. Yet physical inactivity remains a concern in South Africa. According to the 2011 Youth Risk Behaviour Survey, 32% of the learners from grade 8 – 11 reported that they had no physical education classes at school and 30% watched TV or played computer games for over three hours per day.[10] South Africa's 2014 Report Card on Physical Activity for Children and Youth found that fewer than 50% of learners (6 – 18 years) engaged in 60 minutes of moderate to vigorous physical activity a day as recommended to promote health and prevent chronic diseases.[5, 17] A recent study of Senior Phase learners from three schools in Potchefstroom, North-West, found low levels of moderate to high-intensity PA combined with excessive sedentary behaviour. This finding implies that more than 70% of the participants did not meet the recommended health-based guidelines. Higher PA levels were shown during weekends (including soccer, recreational swimming, jogging and dancing), while sedentary activities included listening to music, riding a vehicle and being busy on the phone.[55] Studies of PA levels among urban-based South African primary school learners found that 31% did not meet international standards and that PA levels declined with age from 11 to 14 years. In both studies, boys reported higher PA levels than girls.[55, 56] These findings suggest that there is a need for health promotion efforts targeting particular groups including unhealthy individuals, adolescent girls and those from disadvantaged communities,[57] as low PA levels contribute to the obesity epidemic that threatens the wellness of the South African population and the economy.[17] Increased PA among children will help reduce the risk of future chronic diseases and contribute to the health of the population and the growth of the economy.[56] See case 21 which outlines key challenges and recommendations on how to increase PA amongst preschool and school-age children.

Tuck shops and lunch boxes

The DBE has provided guidelines to establish healthy school tuck shops,[58] but there is no monitoring in place to regulate implementation. Foods bought from tuck shops or vendors are mostly low in nutrients and high in energy, salt, fat and sugar, such as biscuits, crisps and sugar-sweetened beverages. This is concerning as about 50% of school-going children in South Africa regularly buy food at school and do not pack lunch boxes. [5, 19]

A South African study showed that most urban adolescents consumed fast foods, sugar-sweetened beverages and school tuck shop items on three or more occasions per week. Children in the lowest income groups had higher odds of an "unhealthy dietary pattern" than children in the highest socio-economic groups. Children who carried a lunch box to school appeared to have greater dietary diversity, consumed more regular meals, had a higher standard of living and greater nutritional self-efficacy than those who did not carry a lunchbox to school.[34] This finding illustrates how the lunch boxes of children from higher-income groups contained diverse nutrient-rich foods, while children from low-income groups bought cheap nutrient-poor snacks from vendors or tuck shops.

Shifting children's dietary preferences can be challenging. For example, in one study/case, when an urban primary school introduced a 'healthy' tuck shop, older learners responded

Table 14: Opportunities to strengthen food and nutrition interventions during the school years

Intervention	Status	Opportunities for improvements
School feeding	Aims to provide a daily nutritious meal, providing at least 30% of the recommended dietary allowance (RDA) for children over the age of 4 years to learners attending quintile 1, 2 and 3 schools.	Monitoring framework for routine audits and oversight to meet the policy provisions of 30% RDA for all nutrients and compliance with set menus. Advocacy to increase the nutrient provisions to at least 50% RDA
Food gardens	A proven intervention to improve dietary diversity and food security; provide income generation and opportunities to educate learners about healthy diets, the environment and sustainable food production	Food gardens can be used to improve vegetable and fruit intake in line with the food-based dietary guidelines, and provide opportunities for school children to engage with nature as a learning and physical activity
Water, sanitation and hygiene	The provision of sanitation and clean water for drinking and hand washing is vital to prevent the spread of diseases and to ensure effective hygiene practices in both the school and home environment	Monitoring framework for routine audits and oversight to ensure that all schools have sanitation and clean water for drinking, hand washing and food gardens
Physical activity	Physical activity levels are sub-optimal in children and the lack of organized physical activity and sport in schools is a contributing factor to childhood obesity.	Schools need to provide safe supportive environments for physical activity and sport. Health-promoting physical activities at school can be extended to families and the community to build the culture of healthy exercise
School health services	School health services include a healthy physical environment, safe water and sanitation, skills-based health education and school-based health and nutrition services	Annual anthropometric measurements offer an opportunity to identify and intervene in children's sub-optimal growth patterns. School health also offers the opportunity to provide micronutrient supplements and deworming
Healthy tuckshops and lunch boxes	Implementation and monitoring of compliance to the DBE guidelines on healthy school tuck shops	Opportunity to promote healthy food environments in and around schools by promoting and supporting healthy snacks at tuckshops and food vendors. Healthy snacking culture could be extended into families and communities.
Regulating sale and marketing of unhealthy food	Widespread marketing of unhealthy foods and beverages has an impact on children's food choices, purchasing behaviour, understanding of nutrition, appreciation of certain foods, and consumption	Implementation and routine monitoring of recommendations on the marketing of foods and non-alcoholic beverages to children as endorsed by the World Health Assembly in 2010
Nutrition education and health promotion	The curriculum only specifies the outline, not the content of nutrition education, and learner support materials are often inaccurate, irrelevant, or incomplete.	Implementation and monitoring of a target-specific interactive social behaviour change intervention to promote positive health outcomes based on proven theories and models for school-aged children
Building nutrition literacy and agency among school children	Currently no literacy or agency among school-aged children for better food and nutrition offered in schools to and for them.	Modelled on the global climate change movement among school-aged children, there is an opportunity for nutrition literacy and agency especially on the food environment

negatively towards the intervention, while younger children were more positive. Learners in both this school and a control school wanted their tuck shop to allow them to choose from healthy and unhealthy items, such as iced lollies, baked samosas, sweets and crisps.[59] These findings suggest that interventions are best implemented during the early school years before eating habits become established.

Conclusion

The economic situation in South Africa and high unemployment, as well as recent droughts and food inflation, directly undermine individual and household food security, leaving children particularly vulnerable. In addition, there are significant gaps in policy and the implementation of government strategies to promote physical activity and healthy nutrition amongst children and adolescents. Some opportunities to strengthen key interventions during the school years are outlined in Table 14.

Future studies on the analysis of the NSNP menu items and the response to specific micronutrient deficiencies such as vitamin A, iron and calcium are needed, with quantification of the programme's impact on the intended beneficiaries. This information will inform the current poverty index, which is based on the assessment of the schools (quintile 1-3) and

not the community. Most schools benefit from space that could be used to grow fruit and vegetables that are culturally acceptable and environmentally sustainable, and which could augment the NSNP. A clear regulatory framework and monitoring system to restrict marketing of unhealthy food and cold drinks to children, and the availability of snacks high in sugar, fat and salt in the school environment are also recommended. The departments of Basic Education and Health, in partnership with the private sector, should create an enabling environment to promote access to healthy food, active play and sport. It is only when we value the well-being, learning outcomes and holistic development of learners, that we will come up with sustainable approaches that benefit school-age children.

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Transforming social protection to strengthen child nutrition security

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This chapter looks at the role of social protection in contributing to food security in South Africa, particularly as it relates to the nutrition security of children. In addition to social protection measures that directly target children, we also consider others, such as the COVID-19 relief grants, that may have indirect impacts on children. This is especially important during and after the COVID-19 pandemic, where a weaker economy has drastically reduced income opportunities for the poor. The impact of these dynamics on children in South Africa, already the most unequal society in the world, must as far as possible be anticipated and prevented by focused and creative action.

In this chapter we first define social protection, then we consider the nutritional challenges faced by South Africa's children before reviewing several policy instruments and programmes that impact directly or indirectly on children's nutrition. We conclude by offering several recommendations for what should be done differently or better.

What is social protection?

Social protection is commonly understood as a set of public policy measures intended to ensure that all people have access to sufficient resources to live with dignity throughout their life. Social protection programmes can be subdivided into non-contributory social assistance (cash or food transfers, usually targeted at the poor, such as social grants or school meals) and contributory social insurance (such as unemployment insurance or contributory retirement pensions). Broader definitions include access to basic services such as health and education, labour market activation programmes, and social justice measures (such as anti-discrimination legislation).[1]

In this chapter we concentrate on social protection programmes that strengthen the access of children from vulnerable families to good nutrition. These programmes include school feeding and social grants that target children directly, notably the Child Support Grant (CSG) the biggest of the three grants for children in terms of reach, as well as social insurance schemes. We also consider some social services such as Early Childhood Development (ECD) and the Integrated Nutrition Programme, which could potentially contribute to such access.

The notion of a safety net has long been a dominant idea in social protection; a minimum economic threshold below which nobody should fall. The South African social protection system has also remained dominated by the idea of safety nets. Until the COVID-19 pandemic, people of working age (without a disability) did not qualify for social grants, whatever the structural conditions that impacted on their lives. Chief among these structural conditions is the nature of the post-apartheid economy, where large sections of the population are excluded from the formal labour market, and where the informal labour market is largely unprotected in terms of labour laws and social insurance. Many of these informal workers are women, and especially rural women. Women with lower levels of education are furthermore more likely to be economically excluded, making them particularly vulnerable.[2]

Why social protection now?

Although it is too soon to know the exact extent to which the COVID-19 pandemic has damaged the South African economy and what the longer-term impacts will be, it is clear that both formal as well as informal employment declined significantly during 2020. According to Statistics South Africa, the country shed 2.2 million jobs between the first and the second quarter of 2020 due to the COVID-19 pandemic, while the "not economically active" category increased by 5.2 million people to 20.6 million during the same period. At the same time the unemployment rate, using the expanded definition, increased from 39% in 2019 to 42% by the end of the second quarter of 2020.[3, 4]

The hard lockdown at the end of March 2020 shut down the economy. In addition to the closure of workplaces and transport systems, the regulations initially prohibited informal trade completely. This had a severe impact on a large group of people as informal employment accounted for about a

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third of all employment in South Africa in February 2020.[5] In addition to the jobs that were lost between February and April, a further 1.5 million people were furloughed (they believed they had a job to return to but had not worked or been paid since lockdown began).[5] Women, who bear the main burden of responsibility for children, also bore the brunt of rising unemployment, accounting for two out of three jobs lost in the first months of lockdown.

As the stringent lockdown regulations were relaxed it was hoped that employment would pick up. However, the jobs lost in the first months of the year had still not been restored by the end of the second quarter of 2020. Only half of those who had been furloughed had returned to work while 40% had joined the unemployed.[5]

Carefully designed social protection programmes are needed to address both the current crisis and possible future livelihood crises. This support is important not only during crisis periods but could also provide a platform for longer-term income security and development. Cash transfers at a sufficient level over a longer period can improve the living standards of the poor, and can potentially break the intergenerational transmission of poverty, as has been shown to some extent in the case of the *Bolsa Familia* in Brazil.[6] The opposite is also true. If the health and education status of the poor decline beyond a critical threshold, it will be very difficult to assist the poor in recovering to previous levels or to improve on these levels.

The current challenge is therefore one where social protection strategies need to target children while also recognising that resources are shared within households and even beyond. Although social grants are targeted to individuals, for example on the basis of their age or disability status, they effectively contribute to the total income of households. Older Persons Grants not only support the elderly; they also help to support other members of the household. Similarly, although CSGs are meant to be spent directly on children, they may have to support other members too, especially when adults are unemployed or earn very little.

Half of the 16.7 million households in South Africa include children, while the other half are adult-only households. Households that include children are substantially larger (with an average household size of five people) than those without children (which have an average of just 1.8 household members, and many are single-person households). Over half of all working-age men and three-quarters of working-age women are co-resident with children. Yet, adult unemployment rates are higher in households with children than in those only with adults, and households with children are poorer even when taking into account social grants.[iv]

The challenge is that grants for children are then likely to get dissipated in order to support the household in the absence of sufficient income from employment. Yet it is necessary for grants to be targeted to individuals rather than households, because the size and composition of households is dynamic.

The fluidity of households in South Africa has been well documented, especially in the context of apartheid-era migrant labour and influx control which meant that many families were stretched across urban and rural nodes.[7] These dynamics of family fragmentation persist in South Africa today, alongside changing trends in household and family formation: households are getting smaller, fertility rates are declining, marriage rates continue to fall, and more children have biological parents who are not in a union. These dynamics echo global trends. What is unusual in South Africa is the extent of parental absence from the households where their children live: most children live in 'extended' households that include aunts, cousins, grandparents or other kin. Only a third live with both their parents and one in five live with neither parent.[8] These arrangements are not static: children are highly mobile and may be cared for by a succession of relatives as families strategise to secure income, housing, education and other needs while also providing childcare. It is for these reasons that the Lund Committee, when it first proposed the CSG in the 1990s, recommended that the grant be paid to the de facto caregiver of the child, rather than assuming it should be paid to a biological parent. The committee also established the principle that the grant should "follow the child" in recognition that children, like adults, are mobile and caregivers may change. Thus, although grants targeted to children may in practice support the broader household, and grants to other household members may help to support children, it is important that children's grants are individually targeted and that they can move with children.

A new social contract

Antonio Guterres, secretary-general of the UN, called for a new social contract in the early months of the pandemic: "The New Social Contract, between Governments, people, civil society, business and more, must integrate employment, sustainable development and social protection, based on equal rights and opportunities for all."[9] Such a new social contract should be formulated to address, among other issues, the food and nutrition needs of children, by

iv Own analysis of General Household Survey 2018, raw data published by Statistics South Africa.

transforming the social protection system into one which will guarantee sufficient nutrition for all families, but also one that provides access to good quality health, education, and social welfare services. It would signify a commitment by members of government and civil society to create a society of greater equality. It would also put South Africa on track towards achieving Sustainable Development Goal (SDG) 2: "End hunger, achieve food security and improved nutrition".

What are some of the biggest problems regarding the nutrition security of children?

Nutrition insecurity is a multidimensional problem, where poor nutrition outcomes are not only due to lack of access to adequate nutritious food but reflect complex systemic challenges where different problems intersect. Other prerequisites for good nutrition include access to clean water, hygienic sanitation practices, and exclusive breastfeeding of infants up to six months of age, wherever possible.

Approximately one in four children under the age of five in South Africa is stunted due to chronic malnutrition,[10] and a further 15% are overweight or obese. Stunting rates have remained unchanged since 1994,[11] despite the many pro-poor programmes that have subsequently been introduced, not least the extensive expansion of social grants.

The underlying driver of child malnutrition is poverty, which is in turn driven by high unemployment rates and low levels of income for many of those who are employed, particularly women. These factors are exacerbated by problems in the food system that result in lack of access to sufficient nutritious food by many children, such as the ready availability of highly processed fast foods and the power of advertising in distorting dietary choices. Other important issues include the huge inequality between the private and the public health care system in South Africa, specifically the uneven response of the public primary health care system to the nutrition security of young children, and weak government support for ECD services, where young children could potentially receive additional meals. More immediate challenges relate to the low value of the CSG which is inadequate to purchase a balanced diet for the child, a gap in the uptake of the CSG for very young children, and the relative neglect of the needs of refugee and migrant children.

Social grants in South Africa before and during COVID-19

South Africa has a well-established set of social grants that mainly targets children, older persons, and persons with disability. Despite the persistent and structural problem of unemployment, low-income and unemployed working-age adults have historically been excluded from these social assistance programmes. By the end of March 2020, as South Africa went into lockdown, 18.3 million social grants were paid each month.

Two grants, the CSG and the Older Persons Grant, account for 90% of all social grants.

- The **CSG** is targeted to children under 18 provided their caregivers pass the low means test. Seventy percent of all grants are CSGs (nearly 13 million grants), but CSGs comprise only 37% of the grant budget, because the value is very low.
- The **Older Persons Grant** is targeted to persons aged 60 years and over. These grants make up 20% of all grants, yet account for nearly half (45%) of all grant expenditure because of the relatively large amount

The other 10% of grants are targeted to specific categories of children and adults:

- The **Disability Grant** is for adults who have physical or mental disabilities or are chronically ill and unable to work;
- The **Care Dependency Grant** is for children who have a disability or are chronically ill and require full-time care;

Table 15: Overview of social grants as at 1 April 2020[i]

	Child Support	Foster Child	Care Dependency	Disability	Older Persons
Beneficiaries	12,784,324	355,610	154,760	1,042,029	3,676,798
Share of all grants	70%	2%	1%	6%	20%
Value 2020 (pre-COVID-19)	R440[ii]	R1,050	R1,860	R1,860	R1,860
Share of grants budget	37%	2%	2%	13%	45%

Source: Own calculations from SocPen numbers, provided by the SASSA DataWarehouse.

i In addition, the Grant-in-Aid is a small grant to help cover care costs for those who are unable to care for themselves; it is an add-on to an existing grant (disability / older persons or care dependency). The War Veterans Grant is an old military grant for those who fought in the Second World War or the Korean War. Only 62 War Vet grants were paid at the end of March, and soon this grant will disappear altogether

ii The CSG increased by R10 to R450 on 1 October, as planned and announced in the February budget speech.

- The **Foster Child Grant** is for children who have been placed in foster care by a court.

Social grants play an important role in mitigating the effects of poverty for children and their families. Multiple studies have shown that despite its low value, receipt of a CSG is linked to improved nutritional and health outcomes for children as well as numerous other positive effects – in addition to reducing income poverty.[12]

Social grants not only ameliorate poverty but can also cushion poor households against major financial shocks. A study of the impact of the 2008 – 2009 global economic recession on child poverty in South Africa found that state support, and specifically the CSG, substantially reduced the impact of the economic crisis for children.[13]

South Africa's hard lockdown raised immediate concerns that the economic effects of the lockdown and rising

Case Study 22: A maternity grant to support the health of pregnant women and their newborns

Alex van den Heever[i]

A number of years has passed since the Department of Social Development (DSD) initiated a process to consider expanding the system of social grants to support pregnant women, mothers and newborns.[26] However, progress has been slow, and to date no programme implemented. This is possibly due to the perception that such a programme would be a burden rather than a benefit to economic growth and employment prospects.

Approximately 6.2% of all women in South Africa between the ages of 10 and 54 are pregnant in any given year (around 1.2 million).[27] Of these, roughly 69.2% occurred in income-compromised households prior to the COVID-19 pandemic.[28] It is possible that this percentage could be as high as 80% at present. Many pregnant women and women with young children are likely facing very difficult circumstances, with possible long-term intergenerational implications.

Social grants are important tools to directly and indirectly address poverty, inequality and unemployment.[29-33] Not only do they offset inherent tendencies in market economies to concentrate incomes and wealth, but they foster growth and boost employment.[34] A better distribution of income results in a more diverse and resilient domestic economy. Inequality is now understood to retard growth,[33,36] requiring that governments offset income inequality with redistributive measures[36,37]. Social grants are therefore important to support vulnerable households and enable them to thrive.

The proposals for a grant to support pregnant women and mothers with young children are designed to improve the nutritional, income and mental health outcomes of income-compromised households.[38-42] The support measures respond to the specific needs of pregnant women and mothers with newborns. The Centre for Health Policy[26,28] argues in an analysis produced for the DSD that the support framework should encompass a range of interventions including (in 2019 prices): cash transfers for the period of pregnancy equivalent to the Old Age Grant at a value of R1,780 per month (R6.7 billion) and for 24 months thereafter (R16 billion); nutritional support at R534 per person per month (R3.1 billion); and transport services for access to health services at R200 per person per month (R2.1 billion). The total 2019 cost of the package comes to R30.6 billion per annum. All these benefits are in addition to the Child Support Grant which is designed to support the child rather than the primary caregiver.

While the financial cost appears large, particularly given current fiscal constraints, this expenditure primarily involves a restructuring of consumption and the organisation and supply of economic production. When these effects are combined with the positive social outcomes arising from improved ante- and postnatal nutrition and improved maternal mental health, the benefits strongly outweigh any perceived costs.

Given the need for urgent interventions to assist vulnerable households and the beneficial social and economic consequences that flow from social transfers, serious consideration should now be given to a maternity grant. This expansion can reduce exposure to the social context in which 70% to 80% of South Africa's children are born by providing support from the antenatal period through to the child's second birthday. This would strengthen nutrition, mental health and caregiving during the first 1,000 days of a child's life. Additional grants are also important to ensure the general protection of vulnerable families and contribute positively to economic growth and employment.

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unemployment would push many more households into extreme poverty and hunger, and that the existing social protection system was not an adequate safety net: there were large gaps in the net, and – particularly in the case of the CSG, which was substantially below even the food poverty line – the benefits were insufficient to plug the holes. The existing social assistance programme, impressive and extensive as it was, was not sufficient in its design or in the value of the transfers to protect households from the immediate economic crisis or the anticipated recession that would follow.

Even as lockdown happened, the cost of a staple basket of food increased and there were worrying signs of shifts in purchasing behaviour as low-income shoppers selected non-perishable foods and soap over more nutritious and fresh foods.[14] Alongside rising food prices, rising food insecurity was immediately apparent: nearly half of all households ran out of money to buy food in April. In 18% of households, a child had gone hungry in the preceding seven days, and this was despite poignant evidence that adults were making extra food sacrifices to protect their children from hunger.[15] These dynamics are in line with estimates across sub-Saharan Africa as a whole. One regional study found that "19.3% of the population can no longer afford their pre-COVID-19 level of food consumption at the end of an 8-week lockdown" and that 3.9 million children were already very severely food deprived.[16]

Food parcels were a core part of the civil society and private sector solidarity response as well as a much-touted (though relatively insignificant in scale) component of the state's response. But it was clear that food parcels, for a variety of reasons, could not be the cornerstone of the government's disaster relief programme: the system was slow, cumbersome, administratively costly, open to corruption and looting, privileged monopoly franchises over small and informal businesses as suppliers, and caused tension within communities as the targeting was not clear.

During March and April, there were strong civil society calls for urgent disaster relief through cash transfers. The arguments were that the administrative systems for transferring cash are well established, that the administrative overheads are very low relative to other poverty alleviation interventions, and that cash provided greater flexibility for households, who could spend them where they wanted and also use them to pay for other necessary costs such as data, electricity and transport. The two main calls were for:

1. a R500 increase to the CSG as an urgent temporary measure, on the basis that this was the most efficient existing mechanism to transfer cash directly into poor households where it would not only provide protection for children but also for co-resident adults. In addition to reaching a substantial share of the poorest households, it also reached a majority of households that relied on income from informal work; and
2. a grant for working-age adults who were unemployed / low wage earners / reliant on informal sector income, in recognition of the existing gap in the social protection net, the existing high rate of unemployment, and the increase in unemployment due to COVID-19.

The disaster relief package announced by the President on 21 April 2020 and clarified over the subsequent days by the Ministers of Social Development and Finance, consisted of the following additions and adjustments to the social grants package:

- **A "COVID-19 Social Relief of Distress" grant.** This was an entirely new and temporary grant **of R350** per month for adults who were unemployed, earning no income, and were not in receipt of any other social grants, a National Student Financial Aid Scheme grant or funds from the Unemployment Insurance Fund (UIF). This new grant was welcomed as an important protection measure for the "missing" age group (18 – 59) but was also critiqued as being insufficient as the value of the grant was well below the food poverty line, and those working in informal, insecure, and low-wage employment were excluded. Serious implementation problems meant that initial uptake was very slow, eroding the value of support for individuals over the planned 6-month duration of this temporary grant as grants were not back-paid even when it was found that individuals had been erroneously excluded. By August 2020, the linked data systems for verifying eligibility enabled SASSA to implement a zero-income means test by checking bank accounts.[17] In effect, adult applicants were required to be living on nothing in order to qualify for the COVID-19 grant, and after receiving the grant they would need to live on no more than R350 per month, although it is not possible for anyone to survive on this amount of money. Civil society groups challenged this zero-income rule[18] and lobbied for the grant to be continued beyond the planned October 2020 cut-off. At the time of writing, the government had committed to extending the grant until the end of January 2021.[19]
- **A "caregivers' allowance" of R500** per caregiver who is already in receipt of a CSG for child/ren. This was an unexpected addition to the grants package. It was

probably introduced as a cost-saving measure: attaching the increase to just over 7 million caregivers rather than the nearly 13 million child beneficiaries would almost halve the cost of the increase to the state. The CSG received a top-up of R300 per child for one month only, in May. From June, the CSG reverted to its previous value of R440/month. The caregiver grant was an interesting departure as, for the first time since the CSG replaced the old State Maintenance Grant, there was some income support for poor caregivers as well as for the children in their care. This, however, does not alter the fact that children cannot survive on the CSG and, in the absence of a substantial increase to the CSG, it was inequitable. The caregiver allowance was discontinued after the October pay-run.

- **Temporary increases of R250** to all the other existing grants, which could be increased easily and immediately, as happens each year when the increases are announced. After October, the grants reverted to their planned pre-COVID values.
- **No increase to the CSG** – an inexplicable omission, given its pro-poor reach and the fact that it is the only existing grant with a value below the food poverty line.

School feeding and nutrition of children and adolescents

Chapter seven of this volume provides a detailed discussion of school feeding in South Africa. The National School Nutrition Programme (NSNP) will be briefly considered here because of its role in providing nutrition security to school-going children. About 9.5 million learners receive one or two meals on every school day, consisting of at least three ingredients: a starch, a protein, and a vegetable or fruit. These meals are prepared by volunteer food handlers, many of whom receive a stipend under the Expanded Public Works Programme (EPWP).

International evidence on the nutritional impacts of school feeding schemes is inconclusive. Impacts are limited by the fact that meals are provided only on schooldays, not at weekends or during school holidays, and by the extent to which meals at school partly or fully substitute for meals at home, rather than providing 100% additional nutrients. In South Africa, however, an evaluation of a school breakfast scheme introduced in the Eastern Cape found a significant reduction in child stunting, wasting and overweight.[20]

Schools in South Africa were closed early in the lockdown. Learners from only two grades returned to school during lockdown level three of the COVID-19 lockdown in June 2020. Thus about 9 million children had been without these meals during lockdown, at a time when household incomes were severely compromised (the Western Cape Education Department did in fact serve 1.2 million meals under lockdown). Later in June, the Department of Basic Education was instructed by a court order brought by two public interest organisations to provide meals to all learners, including those not attending school at the time. This order was intended to ensure that the meals for school-age children would be received throughout and after the pandemic. It also raised public awareness on the importance of the NSNP.

Early Childhood Development and nutrition

Although ECD is not an inherent part of social protection systems, well-functioning ECD centres typically provide a nutritious meal to pre-school children on the days they attend the centre, similar to the meals served by the NSNP. As was shown in chapter six, one of the biggest problems in the field of ECD in South Africa is the divide between registered and unregistered pre-school centres. Because of the cost related to providing a facility and service which can be registered, a large number of ECD centres operate on an informal and therefore unsubsidised and unregulated basis. These centres are largely invisible to government, but nevertheless fulfil a crucial need. Even though they provide essential care, they are often, under normal circumstances, unable to also afford nutritional meals for children based on the fees they receive from parents and carers.

A survey was conducted in April 2020 investigating what was happening to ECD centres under lockdown. Responses were received from more than 8,500 ECD providers and over 99% reported that their centres had not received any fees from parents and carers, as they had no money. No salaries could be paid by 83% of operators, and 96% of these centres did not have enough income to cover their costs, including meals. This source of additional nutrition for pre-school children has therefore not been accessible during the lockdown period and is likely to also be unavailable in the post-lockdown period. These problems are exacerbated by government policies regarding registration of informal ECD centres, where 20,000 – 30,000 operators run the risk of closure – a risk which has been aggravated during the pandemic, due to a fall in their income.[21]

The relatively small but innovative organisation, the Grow Great Campaign, founded in 2018, has the logo: "Zero stunting by 2030." Its aim is to accompany mothers of children, particularly during the first 1,000 days of the baby's life, and to make education and support available to as many South African mothers as possible in order to prevent stunting.[22] During lockdown Grow Great addressed the

problem of access to food for children and other vulnerable groups by providing families with "CoCare" digital vouchers as outlined in case 23.

As with social grants and the school feeding programme, civil society pressure has been central to ensuring that social protection measures continue to support those who are most vulnerable to the economic effects of lockdown. The Minister of Social Development was taken to court over the contraction of ECD services for young children. In July 2020, the court ordered that the Department could no longer prohibit ECD and partial care facilities from reopening. In October, the court is considering a second application to compel the Minister and the MECs of eight of the nine provinces to pay ECD centres their full subsidies in the light of the re-opening of formal schools (only the Western Cape has continued to do so). ECD subsidies, though very small in per-child terms, are an essential source of income, particularly for centres that serve poor communities.

Case Study 23: CoCare voucher programme

Anna-Marie Müller and Nicola Eley[i]

In response to the anticipated impact of the COVID-19 lockdown on household food security, the CoCare voucher programme was launched as a partnership between the DG Murray Trust, Grow Great and other civil society organisations. We were particularly concerned about the most vulnerable members of society: young children, pregnant women and people not receiving social grants. A third of infants in the poorest 40% of households do not receive the Child Support Grant[43], vital social assistance to poor households.

Reaching families under COVID-19 lockdown conditions was difficult and put both beneficiaries and care workers at risk of infection. Delivering food parcels to households is resource intensive. Evidence suggests that vouchers are preferable to food distribution as they lead to increased nutrient intake per unit cost and improved dietary diversity.[44] Furthermore, making vouchers unconditional works best to increase access to nutritious foods, according to research in humanitarian settings.[3] Vouchers are not a perfect solution: limitations include the potential for the local economy to suffer in favour of large retailers. Through collaborating with technology companies with experience in servicing the informal economy, we mitigated this anticipated impact and strategically ensured that beneficiaries could redeem their Co-Care vouchers at Spaza shops and local general dealers.

In the pilot phase, 3,084 vouchers were redeemed by beneficiaries in four provinces.[ii] For example, in Limpopo and Mpumalanga, Community Health Workers (CHWs) participating in the Grow Great Champions programme identified pregnant women in their areas to receive vouchers. Although the CoCare vouchers were unconditional (i.e. redeemable for any goods sold in Spaza shops), they were complemented with a series of text messages on the "ten best buys" that encouraged beneficiaries to spend their R200-vouchers on nutritious food for their families. Contrary to popular concerns that unconditional vouchers will be misused, an internal survey conducted with 217 voucher beneficiaries found that 94% of recipients mostly used their vouchers for food, with eggs, beans, tinned fish, peanut butter and full cream milk powder being amongst the most reported purchased products.

The pilot aimed to improve food access and utilisation – both essential elements of food security. By pairing an economic supplement with digital technology and health promotion communication on nutritious foods, the pilot presented an efficient and cost-effective mechanism for delivering social assistance with potential for scale-up nationally. Following the pilot phase, CoCare has been rolled out nationally with a total of 11,200 vouchers redeemed by the end of September 2020 through a growing list of partner organisations. For example, Ilifa Labantwana supported the rollout of food vouchers to unregistered ECD centres that then serve as local nodes for identifying and responding to children at risk.[iii] CoCare has demonstrated a mechanism for reaching those often untouched by formal social assistance, with significantly reduced operational costs. Given resource constraints, we suggest this innovation should be widely adopted as a complementary measure to other forms of social assistance.

i Grow Great

ii Greater Letaba and Greater Giyani sub-districts in Limpopo, wards 16 and 19 in Nkomazi sub-district, Mpumalanga, Ugu District, KZN, OR Tambo District, EC, Buffalo City Metro, EC.

iii The centres receive a voucher calculated at a per-child contribution, based on pre-lockdown attendance figures, and children either receive a meal at the centre or a parcel.

Recommendations to improve the nutrition security of children

In this section we explore different possibilities for the improvement of the food and nutrition security of children and their households in South Africa. In doing so, we consider the immediate crisis, which is the result of the current pandemic, and also the longer-term potential for creating a transformative social protection system.

1. The continuation of the COVID-19 relief programmes

The emergency relief package, announced in April, was defined as temporary: the grant top-ups and new relief grants to caregivers and the unemployed would last only six months, ending in October 2020. However, the extent of economic insecurity and household poverty has demonstrated that the existing labour and social protection policies were not sufficient to protect the population in times of crisis.

The emergency social relief programme opened up possibilities for the future: it demonstrated that social grants are an important mechanism by which relief can be quickly, safely, and cost effectively channelled directly into households that need it, and so it is important to address the targeting gaps and secure those channels for all vulnerable households.

The emergency grants also demonstrated that it is possible to achieve the seemingly impossible: the special COVID-19 social relief of distress grant was initiated and implemented at impressive speed, albeit with substantial teething problems. It was possible to create an online application process and establish a system of linked administrative databases for verification of eligibility. These achievements provide an important basis for redesigning an improved social assistance programme that can be strengthened and sustained in the future – for example, where administrative data systems are used to verify the eligibility of applicants, it is important to ensure that the data is up to date (many applicants were excluded because of UIF data that was out of date), and that there needs to be a clear and accessible appeals process for applicants to invoke when they are wrongly excluded.

2. Increase the CSG

There are long-standing arguments for increasing the CSG. It is the most pro-poor of all the grants and is essential for countering the intergenerational transmission of poverty and inequality. Yet the value of the grant is far below those that received top-ups under the disaster relief package. The Older Persons and Disability grants, for example, were R1,860 per month and received an increase of R250, bringing them to R2,110 per month. The CSG did not receive a top-up and remains at R450 in October 2020, less than a quarter of the value of the other grants. It is not enough to provide a child with the basic daily nutrition required for survival. The Minister of Social Development publicly acknowledged that the CSG was below the food poverty line and needed to be increased.[23] We strongly support increasing the CSG to the level of the food poverty line as a minimum (R575 in 2020).

The importance of social grants as the first line of social protection has once again highlighted the importance of addressing long-standing errors of exclusion, particularly for very young children, children without birth certificates, and the children of refugees.

3. Basic Income Support (BIS)

A concerning gap in South Africa's social protection system is the lack of provision for 18–59-year-olds who have no reliable employment or income. Many of these adults live in households that receive some form of social assistance, such as the CSG or Older Person's Grant, but these grants are not designed to cover the needs of co-resident household members. In the absence of sufficient income from work or from additional social grants, working-age adults are forced to depend on the grants targeted to children and older persons, diluting the poverty-alleviating effect of the grants. According to Stats SA,[24] about one million unemployed adults live in households without children or older persons and so do not have even indirect access to social protection unless they are part of the minority who are able to receive UIF (and UIF is awarded for only a limited period). They are not eligible to receive social assistance themselves, and the only exception has been the small emergency Social Relief of Distress Grant introduced during the lockdown.

A coalition of NGOs is campaigning for BIS for the unemployed adult population, to be set at the upper-bound poverty line of R1,268 per person per month. The households they support, the majority of which contain children, would have improved food security because of their additional purchasing power. Some of this money might also be invested in transport and child care costs to facilitate job seeking, as has been seen in earlier evaluations of social protection in South Africa.[25]

At a time when the 2020 global COVID-19 pandemic has been adding impetus to changes in global employment trends, ever larger groups of people without high-level work skills have been marginalised and excluded from the market economy in South Africa. It is vital that these groups

should be assisted towards a subsistence level which will ensure their survival during the post-pandemic economic recession and that would also enable them to re-enter the economy as active and productive citizens, provided there is a labour market where there are job opportunities.

4. School feeding

The NSNP should be given all necessary support to continue delivering meals to school-aged children even when schools are not open, as for instance during lockdown periods or during school holidays. This should continue during the post-pandemic period. Also, at present, schools in two provinces (Gauteng and Western Cape) provide two meals a day, breakfast and lunch, but learners in other provinces get only one meal. This should be standardised at two meals a day across all provinces, to ensure that all learners in South Africa derive equal nutritional support from the NSNP.

5. ECD

Government should continue its support of the formal ECD sector, but it should also pay urgent attention to the difficult problem of how to support and subsidise informal ECD centres. These centres are a first port of call for many impoverished families, and many children who would otherwise not have had nutritious meals could receive daily meals in these centres.

6. Maternity grant

Case 22 motivates for a maternity grant to prevent *in utero* and intergenerational transmission of malnutrition. A child born to a well-nourished and healthy mother is already in a much better position to thrive.

Conclusion

Social protection in South Africa has been found to reduce household food insecurity but to have negligible impacts on child malnutrition. One response is to campaign for higher social grants, especially for children, to achieve the social contract implicit in our constitutional right to adequate food and other basic needs. This is important, but care must be taken not to place unreasonable expectations on what social protection can achieve on its own. Urgently needed are stronger linkages between social protection and access to other social services, such as primary health care. The Integrated Nutrition Programme, for instance, monitors children between birth and the age of five for weight gain and growth, and refers under-nourished children for food supplements. The fact that child malnutrition rates in South Africa remain persistently high suggests that more comprehensive monitoring, referral and treatment regimens are required, in addition to enhanced social grants that, as an absolute minimum, could ensure that each child has enough food to survive and thrive.

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Double burden and double duty: Government action required to improve child nutrition

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South Africa is grappling with a double burden of child malnutrition characterised by the coexistence of undernutrition (including micronutrient deficiencies) and overnutrition.[1] Malnutrition and its associated health burdens have significant economic and social costs. For example, under five stunting alone, was reported to cost R62 billion per annum[2], while the estimated budget allocation for nutrition related interventions in the nine provinces under the health budget vote is R320 million. The estimated additional cost of implementing the proposed response to bring about food and nutrition security is R86.8 billion.[3] To deliver on multiple nutrition goals, opportunities for shared actions need to be explored.

The government response to this double burden includes some pioneering successes. For example, the mandatory regulation of the marketing of infant formula (see Case 7),[4] and the KwaZulu-Natal Initiative for Breastfeeding Support (KIBS) improved exclusive breastfeeding (EBF) from under 25% to 50%[5]. On the other hand, there are significant gaps such as widespread marketing of ultra-processed food to children (see chapter 3), and a lack of adequate safety nets for childhood nutrition. For example, the Department of Social Development (DSD) has extensive networks to implement food provisioning at Early Childhood Development (ECD) centres. However, fewer than 10% of South Africa's pre-schoolers have access to ECD centres supported by the DSD.[3] This chapter examines the potential of integrated actions to address the double burden of malnutrition (double-duty actions) and to measure the South African response against a human rights framework.

The chapter considers the following questions:

- Why should South Africa adopt a double-duty approach?
- To what extent do South African policies and programmes support double-duty action?
- How can we use double-duty actions to strengthen policies and programmes?
- What is needed to enhance the delivery of double-duty actions?

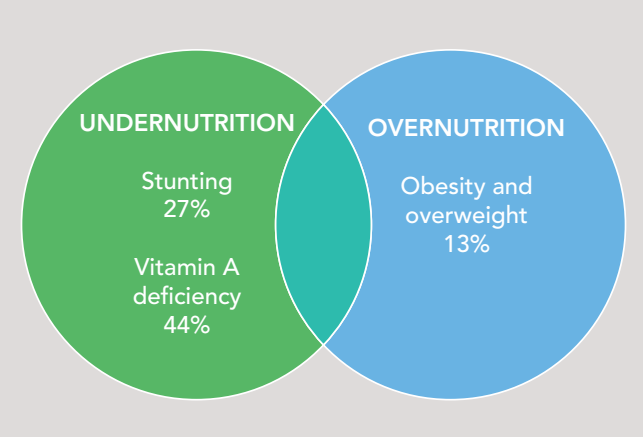
Why should South Africa adopt a double-duty approach?

The concept of a double burden of malnutrition was first introduced in 1992 at the first International Conference on Nutrition[6] which initially referred to the coexistence of undernutrition along with overweight and obesity at a national level. Soon after, it became clear that this double burden existed within communities, households and individuals alike, and that micronutrient deficiencies, known as hidden hunger (such as anaemia) represented an additional threat in many low- and middle-income countries (LMIC)[7], and is sometimes referred to as a triple burden of malnutrition.[8]

The double burden of malnutrition in South Africa

The double burden of malnutrition among children under five has been well-documented.[1] Despite declines in prevalence of wasting and underweight over recent years, Figure 24 shows that children under five are experiencing persistently

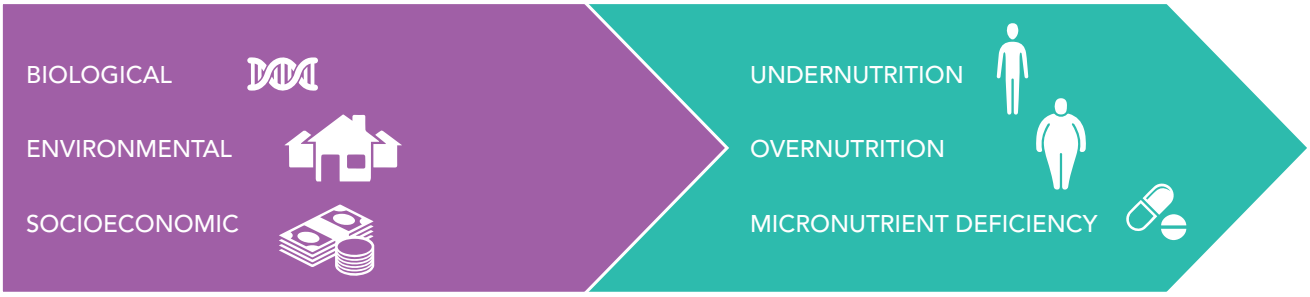
Figure 24: Double burden of malnutrition in children under five years in South Africa



Sources: Kruger HS, Swart R, Labadarios D, Dannhauser A, Nel JH 2007. Anthropometric status. In: Labadarios D, ed. National Food Consumption Survey-Fortification Baseline (NFCS-FB): South Africa, 2005. Directorate Nutrition, DOH. Stellenbosch, University of Stellenbosch.
Department of Health, Statistics South Africa, Medical Research Council & ICF (2017) *South African Demographic Health Survey 2016. Key Indicator Report*. Pretoria: DOH, Stats SA, MRC & ICF

i SAMRC/Wits Centre for Health Economics and Decision Science, PRICELESS, University of Witwatersrand School of Public Health, Faculty of Health Sciences
ii Department of Science and Technology/National Research Foundation Centre of Excellence in Food Security

Figure 25: Shared drivers of the double burden of malnutrition



high rates of stunting (too short for age), micronutrient deficiencies (vitamin A, iron and zinc) as well as increasing prevalence of childhood overweight and obesity.[9, 10]

The double burden of malnutrition places children at greater risk of growth faltering and communicable diseases, and simultaneously puts them at risk of developing nutrition-related non-communicable diseases (NCD) as they reach adulthood, including type 2 diabetes, hypertension, and several cancers. As we understand more about the causes and epidemiology of the double burden, we realize these are not separate conditions. These two types of malnutrition overlap and interact in space and time, and have shared biological, environmental and socioeconomic drivers[11] (Figure 25).

Key shared drivers of this double burden of malnutrition include biological factors such as suboptimal EBF. EBF not only prevents undernutrition in early infancy, it also prevents obesity and nutrition-related NCDs in later life.[12] By contrast, exposure to unhealthy food environments saturated with cheap and accessible energy-dense, nutrient-poor foods in the context of South Africa's nutrition transition could lead to excessive weight gain while simultaneously contributing to micronutrient deficiencies.[13] At a fundamental level, the double burden of malnutrition is intimately related to structural drivers, such as inequality and poverty. With 40% of the population living under the poverty line,[14] low socioeconomic status decreases individuals' ability to afford nutrient-rich foods across their life course, predisposing them to undernutrition, and also to overweight and obesity.

Double-duty actions

The double burden of malnutrition offers an untapped window of opportunity for integrated actions, generally termed "double-duty actions" (DDAs) as illustrated by Figure 26. These DDAs include policies, programmes and interventions that have the potential to simultaneously reduce the risk or burden of both undernutrition (including wasting, stunting, and micronutrient deficiency) and overnutrition (overweight and obesity). DDAs should be underpinned by food-based dietary guidelines (FBDG) and, where available, aim to align with context-specific guidelines like the South African Healthy Eating Guidelines.[15]

Figure 26: Potential candidates for double-duty action

Source: World Health Organization, *Double-duty actions for malnutrition: Policy brief*. Geneva: WHO. 2017.

In 2017, the World Health Organization (WHO) published a set of five potential DDAs including:

- interventions to promote and protect EBF in the first 6 months, and continued breastfeeding to two years or beyond;
- the promotion of appropriate and timely complementary feeding in infants from six months old;
- regulations on the marketing of breastmilk substitutes and unhealthy foods;
- maternal nutrition and antenatal care programmes; and
- school food policies and programmes.[16]

The cornerstone of this approach is the concept of "do no harm": addressing one form of malnutrition should not increase the risk of another type of malnutrition.

To what extent do South African policies and programmes support double-duty actions?

Historically, nutrition and food policies have been dominated by issues of food insecurity, dietary diversity, micronutrient deficiency control programmes, breastfeeding, and infant and child feeding practices. Yet nutrition policies have not kept paced with South Africa's rapid nutrition transition towards unhealthy diets[13] and increasing obesity rates[17]. Instead, policies to counteract overnutrition have been developed separately from existing nutrition efforts, despite the potential for integrated actions. In order to monitor these policies, sentinel sites must collect data surveillance for pregnant women and young children, as currently done for HIV.

Table 16: South Africa's nutrition interventions and programmes by focus on the type of malnutrition

Interventions and Programmes	Undernutrition	Micronutrient deficiency	Overnutrition	Potential and actions needed
Humanitarian food assistance (State food distribution, community feeding initiatives, food parcels and food vouchers)	✓	✓	X	• Introduce and establish humanitarian food assistance mechanisms with monitoring at District level • Introduce and establish a standardized food package for children less than five years old, and older children • Introduce standards on healthy foods linked to nutrient profile with front of pack labelling.
Maternal nutrition	✓	✓	✓	• Scale up and promote healthy eating guidance before and during pregnancy • Establish a maternal nutrition working group to keep abreast of nutrition science and developments to inform policy and programmes • Extend social assistance to pregnant women
Breastfeeding support	✓	✓	✓	• Institute paid maternity leave for six months • Strengthen workplace support for breastfeeding mothers • Provide community-based psychosocial support to pregnant women and new mothers with infants and young children • Launch a public awareness campaign to build a positive breastfeeding culture • Provide training and monitor health workers' breastfeeding knowledge and skills

Regulations around breastmilk substitutes	✓	✓	✓	• Launch a public awareness campaign for R991 • Promote and support a public reporting system for R991 violations • Monitor and enforce R991
Complementary feeding support	✓	✓	✓	• Establish and promote Paediatric Food Based Dietary Guidelines for all forms of malnutrition • Include healthy eating guidance in parenting and childcare programmes • Promote and regulate front of pack labelling
Nutrition assessment, education and counselling	✓	✓	✓	• Establish routine and mandatory nutrition assessment at health facilities • Provide training and monitor health worker nutrition skills and competencies
Micronutrient control programmes • Targeted food supplementation • Food fortification • Distribution of multiple micronutrient supplements	X	✓	X	• Institute regular micronutrient surveys to track prevalence and progress towards elimination of micronutrient deficiencies • Establish a reference working group on micronutrient nutrition to stay abreast of the developments in the field and to advise government
Distribution of therapeutic foods or Therapeutic Nutrition Programme	✓	✓	X	• Integrate counselling on healthy diets and snacks for mothers and young children in all therapeutic nutrition programmes
Food security (household and smallholder production)	✓	✓	X	• Integrate smallholder food production programmes with social grant recipients • Support smallholder farmers with agriculture extension assistance.
Restaurants food outlets and retailers	✓	✓	X	• Use incentives and/or regulations to ensure that retail food outlets display the nutritional quality of food on their menu so that consumers can make healthy choices • Remove junk food from checkouts and promote healthy food option aisles
Food provisioning in ECD programmes and schools	✓	✓	X	• Introduce and establish food and meal audits
Food prices	✓	✓	X	• Use taxes and subsidies to subsidize healthy food baskets for low income households and households relying on social grants • Introduce loyalty programme for low income households and households reliant on social grants for selecting high nutrient foods over luxury foods • Provide discounts on healthy foods for the broader public
Social assistance	X	X	X	• Increase the Child Support Grant to the food poverty line so that it covers the cost of a nutritious daily food basket for children
South African Food Based Dietary Guidelines	✓	✓	✓	• Use the FBDGs to promote good nutrition and prevent under- and overnutrition with an emphasis on plant-based foods and low intake of fats, salt and sugar
Marketing of food products to children	X	X	X	• Introduce mandatory regulations to control the marketing and sales of unhealthy food products to children

Table 16 describes and provides an analysis of some nutrition policies and programmes by type of malnutrition and makes recommendations based on the DDA literature[18] to extend their focus to address the double burden of malnutrition.

There are already several double-duty actions in place but scale and intensity to yield results is lacking. For example, breastfeeding protects children from undernutrition and overweight obesity. While the majority of actions in Table 16 were initially introduced as single-duty interventions to address undernutrition, increasing overweight and obesity rates warrant a critical analysis to ensure that these interventions are strengthened and delivered at scale and at the required intensity to address the double burden of nutrition. Health services which provide growth monitoring (GM) represent one of many untapped areas for double-duty actions. GM was originally designed to detect children who are malnourished, by regularly measuring their weight. Now in face of the growing obesity epidemic, the WHO recommends that GM at primary care facilities should include detection of overweight and related counselling.[19] However, this requires the reskilling of health workers to offer nutrition counselling services to promote healthy and diverse diets, and to counsel against feeding young children ultra-processed foods, snacks, and beverages high in energy, sugar, fat and salt. A monitoring framework needs to be put in place to ensure that guidelines for hospitals and clinics are used to promote and model a healthy food environment. To complement and support the health efforts, regulations should be put in place, enforced and monitored to control the marketing of unhealthy foods to children and regulate the nutrient content of foods marketed to and for children.

Interventions concerned with food access also represent a missed opportunity for DDAs on the double burden of malnutrition. Even before the COVID-19 pandemic, the Department of Social Development's food parcels focused on delivering enough dietary energy to prevent hunger and food insecurity, without regard to nutritional guidelines.[3] Despite civil society efforts to respond to hunger, food parcels have been found to include unhealthy processed food items (e.g., sugar-sweetened beverages, chips)[20] which

Figure 27: WHO's Framework for double-duty actions

are deficient in micronutrients. Similarly, food vouchers are often not linked to the purchase of any specific food, and can be used to buy unhealthy foods, which are often more affordable.[3] This highlights the need for the state to step in and provide a subsidized healthy food basket for children. These potential harms could however be easily mitigated through the introduction of standards for healthy food parcels and conditional vouchers aligned to the food-based dietary guidelines and integrating policies to restrict foods, snacks and beverages high in energy, sugar, fat and salt.

Agricultural development programmes are also obvious candidates for the double-duty action by improving household and individual access to nutrient-rich foods and promoting and supporting the food based dietary guidelines. Reorienting policies to this goal must happen with adequate support and with complementary measures that address unhealthy food environments.

Notwithstanding the pressing need for food price policies, applying a double-duty lens when designing taxes and subsidies will help rebalance food environments towards healthier food choices and outcomes. Effective single-duty interventions such as the taxation of sugar-sweetened beverages that was designed to curb obesity levels, should remain an integral part of the nutrition strategy, and should be implemented with complementary actions such as subsidies to encourage healthy diets.

How can we use the double-duty action approach to strengthen policies and programmes in South Africa?

The World Health Organization has recognised that it is possible to address multiple facets of malnutrition through integrated policies and DDAs.[16] When attempting to implement double-duty actions and develop integrated policies, it is helpful to start by building on and leveraging existing policies. As the WHO states, "Double-duty actions are not necessarily new actions. They are often actions that are already used to address single forms of malnutrition but with the potential to address multiple forms simultaneously."[16] This approach to addressing the double burden of malnutrition is particularly useful in promoting efficiency and policy-coherence.

To guide the adoption of double-duty interventions, the WHO has a three-level approach that can be used to develop and practically implement double-duty actions through policies (see Figure 27).[16] These three levels are i) ensuring existing policies are not harmful, ii) retrofitting existing policies and iii) new interventions that simultaneously address both dimensions of malnutrition.[16]

As a first port of call, decision-makers should look at existing interventions and policies that target a single form of malnutrition and ensure that these existing measures do not have a harmful effect or increase other forms of malnutrition. For example, a measure aimed at addressing food insecurity should not provide ultra-processed or unhealthy foods high in salt, fat and sugar that would cause obesity. The next step would be to adapt these existing measures to address other forms of malnutrition. For example, fiscal measures can be adjusted to create additional incentives or disincentives for certain food-related behaviours. Only where an existing policy cannot be leveraged, should new interventions be introduced to address the double burden of malnutrition.

In South Africa's Constitution there is a human rights imperative to address malnutrition and promote good health.[21] This mandate is placed on the legislature, executive, judiciary and all organs of state, which, in this section, we refer to as government. The government is obliged to "progressively realise" the right to sufficient food and water. Though South Africa is a resource constrained setting, the Constitution still requires the government to have acted reasonably in realising these rights. Reasonableness in this context require that the government actors are continually improving access to these rights in as comprehensive and responsive a way as resources permit

To be truly responsive, and to promote underlying constitutional values like democracy the government also needs to ensure that it engages with the public. The rationale for public engagement includes eliciting information about the population's nutrition and health preferences (determining the current level of food and water provision) and informing decision-makers about the extent to which the public's values and or views on solutions differ from their own.[22] This can also assist the government in designing programmes that address the needs of the most vulnerable – an element which is also built into the duty of "progressive realisation".[23] The government's duty to provide basic nutrition to children is even stronger and cannot be delayed. This means that governments cannot justify insufficient state action by relying on resource constraints.

DDAs should also be guided by the same principle of "reasonableness" and the values of democracy. Evaluating and adjusting policies that are potentially harmful serves the purpose of progressing outcomes of existing policies and actions. Similarly, addressing gaps in policy or retrofitting interventions will likely contribute to a more comprehensive and responsive state programme, and ensure that policy goals can be implemented. Where there are stark policy

gaps, the state has an immediate duty to create a plan of action to ensure progressive realisation of rights in a manner that is measurable and appropriate given resource constraints. Where the right is of immediate effect (when it relates to providing basic nutrition to children), the three-level approach can assist to maximise efficacy of resources.

Similarly, promoting public engagement can lead to resource-effective and responsive programmes. For example, qualitative research in Soweto in 2019 on maternal and child nutrition drivers and solutions, revealed that communities' priorities were linked to upstream determinants including unemployment, social inequities, hygiene and sanitation, violence and crime.[24] Recommendations to improve nutrition extended across the spectrum of health systems, social protection, the food system and food environment.[24] If these cross-sectoral solutions were taken into account, decision makers could better tailor interventions to the needs and values of target populations. Fostering open conversations between decision makers and the public enhances transparency of planning and policy making for nutrition as well as educating the public about resource constraints and the need to make difficult trade-offs.[9, 10]

Opportunities to address the double burden of malnutrition

The double-duty approach is underpinned by the idea that it is more efficient to address problems together. However, it does not preclude prioritization. It means simply that priority actions are designed to deliver more. In practice, it requires stakeholders to consider where they are already allocating resources to tackle malnutrition and examine how these policies, programmes can perform DDAs.[25]

As discussed above, the WHO identified five areas where DDAs could be adopted.[16] South Africa has adopted a number of progressive policies which address NCDs, food quality and malnutrition. For example, in 2012, the Department of Health adopted comprehensive regulations on infant formulas and complementary feeding products in R991 that limited the use of sweeteners in complementary foods, restricted marketing of formulas and introduced improved and mandatory labelling requirements.[4]

However, there is still a need to adapt certain existing policies to address additional forms of malnutrition. Using the candidate areas outlined by the WHO, we identified three policies where retrofitting or a "do no harm" principle could be applied to amend the existing policies to address the double burden of malnutrition (Table 17).

More stringent regulation of food retailers

Gauteng has a disproportionate concentration of fast-food outlets and a lack of formal grocery stores in low-income areas.[26] This creates a food environment that promotes consumption of unhealthy foods and limits the ability of low-income individuals to access healthier foods.[26] Currently, the operation of food retailers is regulated through a licensing scheme and businesses are not permitted to operate without a license. In order to obtain a license, retailers are required to submit a copy of their menu and a zoning certificate.[27] Despite the fact that municipalities are aware of the types of food being sold when a business applies for a licence, they have not used their powers to ensure a more equitable spatial distribution of healthy food retailers or to limit the number of unhealthy food outlets. Therefore, very little progress has practically occurred.

Policymakers at a local government level could leverage this system to a) reduce harm by limiting the opening of new unhealthy food retailers in low-income areas and b) promote

Table 17: Areas for the application of double-duty actions

Candidates For DDA	Existing Policies	Adaption needed for DDA
Actions to optimize early nutrition	Regulations relating to foodstuffs for infants and young children, R991	• Introduce nutrition component to licensing requirements • Introduce regulations to limit the calorie contribution from fat and sugar • Introduce front-of-pack labelling
School nutrition policies and programmes	National School Nutrition Programme	• Enforce and monitor the provision of fresh fruit and vegetables as per menu design • Regulate the sale and provision of sugar-sweetened beverages at schools and through school tuck shops and vendors
Restricting marketing of unhealthy foods	Draft regulation relating to the labelling and advertising of foods, R429	• Adopt in order to prohibit the marketing of unhealthy food to children (including the use of celebrity endorsements and promotions)

the availability of healthy food outlets by creating incentives and easier licensing processes for businesses selling healthier foods.[28] Policies would need to be tailored to this goal and health behaviours encouraged as part of the same package. This would improve the overall quality of the food environment and address multiple facets of malnutrition. However, as will be discussed in more detail below, the lack of a national body with powers to comprehensively regulate nutrition and the need to rely on local governments to implement these types of interventions may lead to fragmented and inconsistent policies.

National School Nutrition Programme

South Africa currently has a feeding scheme which aims to provide at least one meal a day to lower quintile schools.[29] The scheme feeds in excess of 9 million children.[29] The scope of the scheme's reach and importance was reaffirmed when the suspension of the feeding scheme during the school closures under the COVID-19 lockdown led to millions of children losing a major source of food and nutrition. This led to a court case being filed against the Department of Basic Education (DBE) to have the feeding scheme be reinstated based on numerous accounts of the impact of the suspension of the scheme.[30] However, even before the feeding scheme was suspended, its implementation was hampered by several challenges including unavailability of necessary infrastructure, delayed or non-delivery of supplies, or misalignment of supplies with those prescribed.[31] The impact of such bottlenecks has been documented, for example, the meal fails to meet the 30% of children's daily energy and micronutrient requirements.[32] Some research has shown that by fortifying school meals or introducing more nutritious foods, the school feeding scheme can be used to address aspects of malnutrition beyond undernutrition.[29, 32] This will require a policy directive to improve the nutrient quality of the school meal. Despite the fact that the school feeding scheme provides a mechanism to improve the dietary intake of many children, the focus of policy action from DBE has been on caloric sufficiency of the meals rather than their nutritional composition. In 2017, the DBE rejected a recommendation that micronutrient fortification or supplementation be used to improve the quality of the meals. The reason provided was that fortification was the domain of the Department of Health, not DBE, highlighting the shortcomings of a siloed approach to nutrition which does not adopt integrated solutions to address multiple facets of the burden of malnutrition. The activation of the proposed multi-sectoral Food and Nutrition Security Council would foster an intersectoral approach that is so needed in South Africa.

The DBE's position regarding the limits of its mandate has meant that much of the policy action related to nutrition is in the form of guidelines and not binding regulations, limiting their implementation. For example there are nutritional guidelines available in South Africa to assist schools in the composition of healthy and varied meals, as well as voluntary guidelines for healthy school tuck shops, however these are not being enforced.[33, 34] These guidelines should be implemented and monitored by the DBE, in order for school-based interventions to serve as double-duty actions to improve the nutritional status of school-age children and adolescents.

Restricting marketing targeted at children

Introducing comprehensive marketing restrictions in South Africa is complicated because there is no centralised regulatory authority empowered to regulate advertising. The most comprehensive body that currently exists is the Advertising Regulatory Board,[iii] which is voluntary, and carries no government-sanctioned mandate related to advertising restrictions. It also funded in part by the food industry which creates a conflict of interest. Consequently, advertising restrictions have been piecemeal, and this will be the case until a national regulator is created. However, municipalities can use their existing powers to regulate advertising and the availability of food products through channels such as billboards and tuckshops, and can thereby shape behaviours that lead to overnutrition and obesity.[36]

Marketing restrictions are considered to be an effective means to prevent obesity and support the development of healthier eating behaviours.[37] Research has shown a proliferation of outdoor advertising for unhealthy food products such as sugar-sweetened beverages near schools or on school grounds in Soweto.[38] Limiting the advertising of unhealthy food products on billboards near schools could provide a mechanism to implement a double-duty intervention. Municipalities could utilise their powers to approve and regulate billboards to operationalise high-level national policies from the Department of Basic Education on advertising in schools.[21] These powers can be used to limit the existing exposure to unhealthy products and prevent the erection of further billboards near schools.

Increasingly companies are shifting away from traditional forms of advertising and moving to below-the-line advertising, like social media. This has accompanied the growth in on-demand content services like Netflix and Spotify

iii A self-regulatory body, previously known as the Advertising Standards Authority of South Africa

Case 24: Lessons from Mexico and Brazil

In Mexico, school breakfasts are regulated by nutrition standards, which limit sugar and fat content. A focus on traditional Mexican foods (rich in micronutrients); along with wholegrain cereal and fresh produce enhances the quality of the meal. This measure is accompanied by nutrition education for both parents and children.[35] Simplified nutrition labelling in the form of front of package warning labels for products high in sugar, fat and salt have been introduced in Mexico.

In Brazil, the national school feeding programme places strict requirements on the meals provided: a weekly minimum of fruits and vegetables, limits on sodium content and sweets and a focus on fresh and traditional food. Local law also limits how much processed food schools can be purchased (less than 30%) and prohibits drinks with low nutritional value (such as sugar-sweetened beverages).[35] The government is also in the process of implementing front of package warning labels for unhealthy foods.

which increases the need to create a mechanism to regulate advertising on both old (TV and radio) and "new" media. The WHO recommends two important steps for governments to take in this regard: first, recognise that they have a duty to protect children online through statutory regulation, and b) second, establish regulatory agencies with appropriate sanction and penalty mechanisms. In October 2020, the Minister of Communications and Digital Technologies published a draft policy framework which proposes the introduction of regulations "in respect of scheduling" on "the advertising of alcoholic beverages and harmful foods that are high in salt, sugars, fat, saturated fats or trans-fatty acids or that otherwise do not fit national or international nutritional guidelines". The policy framework is also aimed at bringing the evolving landscape of audio and audiovisual content into the ambit of government regulation.

What is needed to enhance the delivery of double-duty actions?

Adopting a well-formulated DDA approach is only one side of the equation. The other is the capabilities of the state to deliver and implement DDAs. In order for DDAs to reach their full potential, strong technical and implementation capacity of the state is required. However, South Africa is currently facing a number of resource, skills, political, organisational and management constraints.[39, 40] The state, and especially local government, lacks the necessary mechanisms or instruments such as a professional and highly skilled bureaucracy to dispatch and drive our developmental agenda, including food and nutrition security.[41]

Leadership and coordination

Food security and nutrition does not fall under the mandate of any specific ministry or sphere of government. To address this, the National Policy on Food and Nutrition Security (NPFNS) was approved by Cabinet in September 2013 and published in the Government Gazette, 22 August 2014 (No 37915) by the Department of Agriculture, Forestry and Fisheries. It provides a definition of concepts, a guiding framework, and considers the regional and global obligations of South Africa, as well as the wider role of government. The policy proposes achieving food and nutrition security through five pillars:

- Improved nutritional safety nets, including government run and supported nutrition and feeding programmes and emergency food relief,
- Improved nutrition education,
- The alignment of investment in agriculture towards local economic development,
- Improved market participation of the emerging agricultural sector,
- Food and Nutrition Security Risk Management, including increased investment in research and technology.

Although each of the pillars has DDA potential, moving from policy to programmes of action has been slow. In March 2015, Cabinet directed that an integrated nutrition plan be developed which would guide implementation. A draft of this National Food and Nutrition Security Plan (NFNSP) was prepared by an Inter-Governmental Technical Working Group and first presented in September 2015. It has since been through a consultative process with government departments, a joint meeting of Portfolio Committees (PCs) convened by the PC on Agriculture Forestry & Fisheries and costed.

The immediate goals are focused on governance, coordination, and policy and programme reform with six objectives:

1. Establish a multi-sectoral food and nutrition security council to oversee alignment of policies, legislation and programmes;

Case 25: What does the COVID-19 pandemic mean for the double burden of malnutrition?

The COVID-19 pandemic and its socioeconomic impacts have disproportionately impacted diets, nutrition practices and services. The work on curbing the double burden of malnutrition has assumed even greater significance at the time of COVID-19 when children are at increased vulnerability from:

- **Food insecurity and hunger:** During lockdown, children who were once fed daily were no longer at school, so they relied on parents for providing adequate feeding. With a rise in food prices and disruption in food supply chains, the earnings of the poor and vulnerable fell and many families were unable to afford enough food to last through a prolonged lockdown, despite the government's temporary COVID-19 grants. Mothers milk production is also affected both by poor nutrition and stress. These in turn affect diet quality and health, leading to increases in all forms of malnutrition.
- **Micronutrient deficiencies:** Disruption in essential nutrition services and lack of access to fortified food, that includes iron, iodine, folate, vitamin A, and zinc, is likely to increase already high rates of vitamin and mineral deficiency in children.[12]
- **Unhealthy foods:** Fresh food supplies in particular were more impacted during the pandemic than staples and global cereal stocks. As a result of decreased purchasing power, the public was compelled to eat cheaper, ultra-processed foods that are less nutritious but more easily available. This perpetuates unequal nutrition outcomes and further increases vulnerability to stunting, obesity and associated NCDs, which in turn increases the severity of COVID-19 symptoms.

Rises in double burden of malnutrition can be prevented, now and during other crises. Recommendations for DDA during a pandemic include:

- Maintain and increase coverage rates of essential nutrition services. Service coverage is already poor e.g. vitamin A coverage reaches only 42% of South African children under five.
- Strengthen social safety nets to improve dietary quality, not just quantity. School feeding programs should adopt new modalities to safely distribute food during school closures.
- Food aid through vouchers and price subsidies could stimulate demand for fruits and vegetables, dairy, and other nutrient-rich foods and limit unhealthy food intake.
- National leaders and the media must stimulate demand for protective nutrient-rich foods and encourage appropriate infant and young child feeding practices, including optimal breastfeeding and dietary diversity.

Without deliberate action, the COVID-19 crisis will set us back several years in our efforts to eliminate micronutrient malnutrition. But it doesn't have to.

2. Establish inclusive local food value chains to improve access to nutritious affordable food by increasing production of agricultural products and nutritious crops, stimulating markets for smallholder producers, and establishing and strengthening producer development institutions.
3. Expand targeted social protection measures and sustainable livelihood programmes by expanding a network of feeding and food distribution centres.
4. Scale up high impact nutrition interventions targeting women of reproductive age, pregnant and lactating women and infants.
5. Develop an integrated communication plan to encourage people to make informed food and nutrition decisions.
6. Develop a monitoring and evaluation system including an integrated risk management system for monitoring food and nutrition related risks.

Once again, these objectives can be achieved through a DDA approach in theory, however several constraints should be addressed first if state capacity to prevent malnutrition is to be more comprehensively built. Among others, there is a need to overcome organisational and management constraints in all spheres of government, but especially at the level of municipalities in the poorest regions of South Africa.[41] Departmental and sub-national policies continue to remain uncoordinated and at times incoherent. The impact of this was evident during the lockdown implemented by Government during 2020 in response to COVID-19.[42]

Beyond this, fragmented mandates at the national and provincial levels, and the powers vested in local governments (including zoning, municipal services and trading regulations) create difficulties in bringing together policies at the various points of intervention. During the COVID-19 lockdown, community-based responses emerged as a relatively

effective means to address hunger, although not necessarily adequate nutrition. In this context, DDAs could have usefully been adopted to identify which bodies and sectors had the resources and authority to implement responses to the hunger and nutritional shortfalls experienced during the lockdown. A DDA approach would also have allowed interventions to be more carefully designed to fit within the scope and capacity of the powers across South Africa's multi-tier system of government. In the longer term, South Africa requires improved institutional arrangements across and within departments and spheres to improve delivery both during a crisis such as COVID-19, and as an on-going approach to addressing child food insecurity.

Several options are possible. As noted, the National Food and Nutrition Security Plan for South Africa 2018-2023 (NFNSP, November 2017 version) called for the establishment of a multi-sectoral Food and Nutrition Security Council to oversee alignment of policies, legislation and programmes, and coordination and implementation of programmes and services. Although the Council does not appear to have been established in the form envisaged by the NFNSP[43], there has been some progress towards monitoring food and nutrition security indicators. The objective of this Council is well aligned with a DDA approach. Its mandate includes bringing responsibility for food security and nutrition improvement at the highest political levels under one authority, that includes national, provincial, municipal spheres of government.

While a coordinating committee that could play this role has been put in place, comprehensive implementation strategies are not yet in place at the sub-national level, and common goals, clear objectives, metrics for monitoring and evaluating food and nutrition interventions have not been set in consultation with all stakeholders, particular those in civil society and the private sector. Building effective bureaucracies that take account of food and nutrition security is needed across all spheres of government if the capacity to intervene through DDAs is to be put in place.

In addition, stronger links are needed between food availability driven by the National Department of Agriculture, Land Reform and Rural Development, and other dimensions of food security such as accessibility, utilisation and stability that are driven by other departments and spheres. These are recognised by the NFSNP but will require funding. There are some positive developments at the level of provinces and municipalities with a Western Cape Government Strategic Framework for Household Food and Nutrition Security in place, as well as the Gauteng Integrated Food Security Strategy. For example, the Western Cape Food Relief Forum played a coordinating role that cut across multiple sectors (see case 26), and the City of Cape Town is exploring how to use the food system to support double duty action.

While a central authority at the level of national government is important, municipalities have a critical role to play. Access to water is an important service for the production, processing and preparation of food. The right of access is guaranteed in 27 (1)(b) of the Constitution and municipalities are responsible for water services. In particular, adequate clean water is essential for the hygienic preparation of food for children, as well as preventing the spread of COVID-19. Access to electricity is essential for cooking and the safe storage another critical component of food security that municipalities are responsible for.[44]

Another focus of the NFNSP is to scale up high-impact nutrition interventions targeting women, infants and children. Here, the strategy notes that although the South African government does provide high-impact, nutrition-specific interventions targeting women, infants and children, such as antenatal nutrition and EBF programmes, coverage remains low. Expanding both the depth and spread of these programmes is an obvious candidate for DDA and can significantly contribute towards improved child nutrition. In practice, this would need to overcome severe state capacity constraints including the skills and knowledge deficits of healthcare workers, dietitians and social workers.[45] COVID-19 responses have potentially exacerbated the problem by restricting mobility and by limiting access to facilities providing nutrition and health interventions.

Costing and funding

There is a lot to do so where do we start? Costing and then funding the NFNP is necessary to ensure the prioritisation of key actions by all spheres of government and to determine the optimal sequence in which they should occur. Cost estimates of interventions, as well as their scale up and their impact in terms of morbidity and mortality must be well understood. Assumptions underlying costing must be made explicit in order to appreciate which inputs have been costed. In reality, interventions do not cost the same. Some interventions (e.g. education and marketing) may require higher start-up costs, while the modification of key messages conveyed at nutrition counselling requires minimal supplementary costs. Therefore, information on current investment in nutrition interventions must be available to estimate true costs.[46]

Costing also helps the process of mobilising funding for programmes, as this has not increased since the NFNSP was completed, with social protection grants receiving only

Case 26: Western Cape Food Relief Forum drives cross-sector collaboration

Andrew Boraine[i]

The COVID-19 pandemic and the economic hardship resulting from the lockdown in South Africa vastly increased the need for food aid and resulted in civil society organisations (CSOs), private donors, and the public sector in the Western Cape working together in a structured way to address these needs.

The Western Cape Economic Development Partnership (EDP)[ii] initiated the NGO-Government Food Relief Coordination Forum in April 2020 in response to the food crisis. The Forum consisted of large food NGOs, intermediary food donor networks, faith-based organisations, grassroots community action networks and community kitchens, and public sector representatives, all involved in the provision of food aid within Cape Town and the Western Cape.

A number of key insights have emerged from this process. The first was the pressing need for building intersectoral collaboration. This was complicated by two factors: many institutions were initially acting in isolation of each other, and CSOs varied widely in size, experience, capacity and resources. The Forum, coordinated by an independent entity with a track record of building relationships, was able to give all role-players a voice and facilitated new linkages, collaboration and knowledge exchange between and within sectors.

The impact of the Forum was enhanced through its access (via the EDP) to the Western Cape Government's bi-weekly Humanitarian Cluster Committee, a whole-of-government approach to the crisis incorporating seven provincial government departments, the South African Social Security Agency, the City of Cape Town and five district municipalities. This meant that public sector officials participating in the Forum were able to represent an integrated government approach and not just the views of individual departments.

This process of engagement was supported by an approach that explicitly favoured partnering for joint action, rather than dialogue. Forum meetings were relatively short, with smaller agendas, to allow for faster decision-making and more agile responses to issues. The Forum was constructed and seen as a safe space, particularly for public sector officials to engage constructively with civil society and answer burning questions. It developed into a place of shared purpose with an intentional lack of hierarchy and power dynamics. Pre-existing relationships were leveraged, where appropriate, to broaden networks and fast-track solutions.

The EDP, as Forum convenor, adopted an adaptive governance approach to the process by urging partners to step into action, while at the same time regularly pausing to reflect, learn and, if needs be, adapt and adjust their plans, rather than waiting for the 'perfect' plan or data.

One of the main challenges in providing food relief was the absence of robust data – knowing who is providing food, how much, the calorific content, where, and how often. A subset of Forum members developed data capture platforms to assess existing efforts, prevent duplication and identify areas being overlooked. In this process, some key lessons on civil society food data mapping emerged which have been published in a report.[1] A second set of learnings, on the utilisation of digital vouchers to enhance food relief, is also available.[2]

The most powerful lesson from the Forum was the reminder that the tactics used so effectively during the Western Cape drought applied equally in a different crisis. The call then was to "Connect, communicate and collaborate". This approach, exemplified throughout the Forum's actions, led to the development of new relationships, engagements and effective actions to address an unprecedented crisis.

These new relationships, which include networks of food system researchers and policy advocates, are now being leveraged through a reconstituted Western Cape Food Forum to initiate joint action between different sectors and stakeholders in support of more long-term food and nutrition system change in the Western Cape.

A full report on the activities and lessons of the Food Forum during the crisis is available.[3] For more information on the ongoing work of the Forum in supporting food and nutrition systems change, contact Andrew Boraine at andrew@wcedp.co.za or on 021 832 0200.

i Western Cape Economic Development Partnership

ii The Economic Development Partnership is a collaborative intermediary organisation established in 2012 to help stakeholders from different sectors work together to deal with complex societal issues.

Case 27: Food and nutrition response during COVID-19 – High expectations and great disappointments

Chantell Witten and Maria van der Merwe

In 1994, the first democratic government recognized the need for a national integrated nutrition programme to address malnutrition in South Africa.[53] South Africa, supported by a fraternity of nutrition professionals, research institutions and development partners, has since made progress on several strategic, evidence-based food and nutrition policy developments.[53,54]. The country has been hailed and recognized internationally for its nutrition capacity and programming.[55,56]

The country's political will to address malnutrition is captured in the foreword of the National Food and Nutrition Security Plan for South Africa (2018-2023). Penned by President Cyril Ramaphosa, it states that 'The National Food and Nutrition Security Plan 2018-2023 embodies our collective response to the challenge of food insecurity and malnutrition'.

Despite the demonstrated capacity and political will to address food insecurity and malnutrition, the COVID-19 pandemic exposed the inertia and inefficiencies that limited our national food and nutrition response. The pandemic will be remembered for media images and headlines of people, and children in particular, queuing for food. While chronic malnutrition is well documented in South Africa and is worsening,[5] the long meandering lines of people queuing for food relief should have been sufficient evidence to warrant a humanitarian response to ensure access to food,[58] a basic human right.

Food insecurity, a known global disrupter

Leading up to the lockdown, the President reportedly consulted with key stakeholders, thought leaders and community representatives. One would have a reasonable expectation that food insecurity would have been a priority discussion point given that hunger is a known global disrupter.[59] Yet, months into the national lockdown, there was no sign of a national strategic plan to ensure food and nutrition security, especially for children.

In 2018, an estimated 20 million people experienced hunger or were in precarious positions of food insecurity in the country. As expected, NIDS-CRAM wave one findings reported an increase in hunger following the lockdown due to income shocks and interrupted access to food, including the closure of the school feeding programmes and Early Childhood Development (ECD) centres.[60] The NIDS-CRAM survey findings on hunger reflected positive changes between May/June and July/August 2020, with hunger declining for "anyone in the household" from 22% to 16%, and for children from 15% to 11%.[61] Yet, even as the lockdown levels eased to level 1, household hunger was higher than before the pandemic. Households reported running out of food earlier in the month and feeding lines did not shorten, with many feeding initiatives stretched to the brink of collapse.[10] In October 2020, government stopped the payout of the R500 caregiver grant despite massive job losses among women, increased food prices and the increased indebtedness of many households as a result of loans, advanced sale of labour and credit.[63] As many commentators predicted, the ensuing hunger and food insecurity affected many more individuals than COVID-19. More disheartening was the collateral damage to children. Malnutrition is known to affect children long after the hunger has passed, casting a long shadow into their adult years; negatively affecting their health, cognitive development and earning potential.[64]

Piecemeal responses to the COVID-19 food crisis

Hamelin and colleagues described the experience of household food insecurity in four stages, starting with anxiety about food, followed by diminished parental food quality, household food quantity, and finally compromised child diets.[65] As reported earlier, there were indications of compromised child diets within the first two months of the lockdown period.

Early in the lockdown, civil society actions focused on feeding children,[66] illustrating the narrow space that households had to navigate the abrupt shock to their food security. A significant proportion of households rely on retailers for their food rather than on self-production or subsistence farming. Yet informal trading was initially prohibited, limiting local access to food.[67] While government, in particular the Department of Social Development, fumbled to respond to the overwhelming cries for food, civil society was divided on a strategic response to the crisis – with calls for an increase to the Child Support Grant and the introduction of Basic Income Support versus the immediate and pressing need for

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ii Independent nutrition consultant

humanitarian food relief.[68] Yet, the additional grant was not allocated per child but per caregiver, and the increase did not keep up with the increase in food prices and the cost to access food.[69] Even with the grant increase, a single mother with one child would not reach the upper poverty line. Not only did the lockdown disrupt income, it also saw the closing of schools and ECD centres and with that, the much-needed feeding programmes provided by them respectively.[70]

Stages of household food and nutrition insecurity and the required appropriate action

Since 1994, the United Nations Food and Agriculture Organization (FAO) has invested in food security, nutrition, and livelihoods analysis, and its relevance for decision-making. The FAO's Integrated Food Security and Humanitarian Phase Classification (IPC) tool allows decision-makers to identify the nature and extent of food insecurity with greater rigour, supported by clear evidence to promote strategic decision-making and stronger linkages between information and action. This improved analysis enables food security and humanitarian interventions to be more needs-based, strategic and timely.[71] For many households, the need for food during the lockdown was dire. It was, therefore, appropriate and imperative to activate a humanitarian response. This was widely provided by civil society,[72] in the absence of a coordinated and appropriately scaled government response.[73]

Even before the COVID-19 pandemic, six million of South Africa's 20 million children lived in households with no employed adults. About one third (6,4 million children) live in households where income is below the food poverty line.[74] Humanitarian food provision, therefore, remains imperative. The emergence of community networks and organized feeding initiatives has brought much-needed relief, but it is all too obvious that these initiatives cannot continue to rely on goodwill and a charity response. A systematic and long-term strategic plan is needed to support food and feeding initiatives.[57]

Increasing the availability of affordable health-promoting food together with livelihood programmes, such as those by the Department of Public Works; income-generation programmes like food gardening initiatives; and entrepreneurial and enterprise development will be needed over the medium to longer term. Given South Africa's negative economic growth, increasing unemployment and persistently high levels of chronic malnutrition, it is time for the food and nutrition fraternity to call on government to activate the proposed food and nutrition coordinating mechanism in the Presidency. Coordinated and adequately funded efforts, as outlined in the National Food and Nutrition Security Plan,[54] are required to address both growing food insecurity and malnutrition and the increasing prevalence of overweight, obesity and diet-related non-communicable disease. There is an urgent need to implement double-duty actions that simultaneously address all forms of malnutrition.[75] Central to addressing the food crisis is a revolution of the food system with clear nutrition outcomes aligned to the United Nations Nutrition Targets of reduced stunting, improved maternal anaemia and no increase in childhood overweight.[76]

While research findings and a myriad of webinars and opinion pieces on food and nutrition have made headlines, without a coordinated national response, children are paying with their lives and their futures for our collective inertia and indifference to the slow violence of child hunger and malnutrition.

minimal increases. Improving the revenue collection capacity and spending effectiveness of local governments must be a component of this. Consideration could also be given to incorporating indicators for food and nutrition security into the determination of a nutrition sensitive division of revenue between local governments. This would ensure that local governments in less resourced areas receive additional funding through which DDAs can be supported.

Finally, in addition to adopting a double-duty approach to policy making, transparent alignment between nutrition outcomes, policies and budgets is essential. This is underpinned by South Africa's commitment to the Convention on the Rights of the Child (CRC) that has made transparent budgeting one of the obligations on states in realizing the right of children to health.[47] The Accountability and Transparency for Human Rights Foundation (2013) has suggested that budget transparency around child nutrition in SA can be enhanced in a number of important ways.[48] While planning for nutrition is part of each department's Annual Performance Plan (APP) at both national and local level, the specific targets and budgets for nutrition are not always evident. Provincial budgets for example, reveal no correlation

between the magnitude of childhood stunting and the amount of nutrition funding.[49] Current line item budgets are not linked to outcomes and can be hard to track at the best of times. For example, within Health, nutrition interventions are integrated into larger budget line items such as primary health care services.

In another sector, the Department of Social Development is responsible for delivering food parcels and monetary food vouchers, without demonstration of separate line items in the annual performance plan.[3] This inability to disaggregate line items makes it difficult to hold departments accountable for spending or budgeting on nutrition and achieving related goals.[3] The importance of doing so has been highlighted by the response by national government to the food and nutrition shortfalls experienced during COVID-19. What is required is transparent strategic purchasing coupled with double-duty policies that makes explicit the alignment between allocated budgets and the multiple outcomes of the spending. This is key not only for nutrition budgets, but for justifying how the public purse is spent toward the realization of Universal Health Coverage in South Africa.

In addition to these opportunities to improve DDAs for child malnutrition, constraints such as staff shortages, insufficient nutrition training, and limited nutrition knowledge across all departments will also need to be addressed. COVID-19 has highlighted the importance of a properly resourced public health system, without which child food and nutrition security will not be possible.

Conclusion

A number of elements are required to meaningfully deliver double-duty interventions and address the double burden of malnutrition in SA. Firstly, it will be essential to ensure alignment among national departments responsible for other issues related to food security, such as climate change, energy, water, food safety, and food marketing. These include the departments of Trade and Industry, Agriculture, Basic Education, Water and Sanitation, together with health and related policies to ensure policy coherence on over and under nutrition. Simultaneously we must develop accountability mechanisms to review, report on and monitor commitments. Thirdly, the COVID-19 pandemic has exposed how new tax and trade policies are needed to both stabilise and or subsidise rising food prices for healthy foods. In their absence a resilient recovery will be challenging, and the double burden of malnutrition will worsen.

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PART THREE

Children Count – the numbers

Part three presents a set of key indicators highlighting drivers of child and adolescent morbidity and mortality and disaggregates data to make visible inequalities in children's health, nutrition, living conditions and access to services. A set of key indicators tracks progress in the following domains:

- Demography of South Africa's children
- Income poverty, unemployment and social grants
- Child health
- Nutrition
- Education
- Housing
- Basic services

A full set of indicators and detailed commentaries are available on www.childrencount.uct.ac.za.

Parents prepare meals for children attending Bulungula Incubator's Jujurha Preschool.
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Introducing Children Count

South Africa's commitment to the realisation of socio-economic rights is contained in the Constitution, the highest law of the land, which includes provisions to ensure that no person should be without the basic necessities of life. These are specified in the Bill of Rights, particularly section 26 (access to adequate housing); section 27 (health care, sufficient food, water and social security); section 28 (the special rights of children) and section 29 (education).

Children are specifically mentioned and are also included under the general rights: every child has the right to basic nutrition, shelter, basic health care services and social services. These form part of what are collectively known as socio-economic rights. While these rights are guaranteed by the Constitution, the question is: how well is South Africa doing in realising these rights for all children? In order to answer this question, it is necessary to monitor the situation of children, which means there is a need for regular information that is specifically about them.

A rights-based approach

Children Count was established in 2005 to monitor progress for children and is an ongoing data and advocacy project of the Children's Institute. It provides reliable and accessible child-centred information that can be used to inform the design and targeting of policies, programmes and interventions, and as a tool for tracking progress in the realisation of children's rights.

Child-centred data

Any monitoring project needs regular and reliable data, and South Africa is fortunate to have a fairly good supply. There is an array of administrative data sets, and the national statistics body, Statistics South Africa, undertakes regular national population surveys that provide useful information on a range of issues. Most reports about the social and economic situation of people living in South Africa do not focus on children, but rather count all individuals or households. This is the standard way for central statistics bodies to present national data, but it is of limited use for those interested in understanding the situation of children.

"Child-centred" data does not only mean the use of data about children specifically. It also means using national population or household data and analysing it at the level of the child. This is important, because the numbers can differ enormously depending on the unit of analysis. For example, national statistics describe the unemployment rate, but only a child-centred analysis can tell how many children live in households where no adult is employed. National statistics show the share of households without adequate sanitation, but when a child-centred analysis is used, the share is significantly higher.

Counting South Africa's children

Children Count presents child-centred data on many of the areas covered under socio-economic rights. As new data become available with the release of national surveys and other data sources, it is possible to track changes in the conditions of children and their access to services over time. This year, national survey data are presented for each year from 2002 to 2018, and many of the indicators in this issue compare the situation of children over this 17-year period. Unfortunately it was not possible to update indicators from the General Household Survey in this issue edition of the *Child Gauge* as the 2019 data had still not been made available by Statistics South Africa at the time of going to print. Like other institutions across the country, Stats SA has faced enormous challenges during 2020 as a result of lockdown, and there were delays in processing and preparing the statistical data for release.

The tables on the following pages give basic information about children's demographics, care arrangements, income poverty and social security, education, health and nutritional status, housing and basic services. Each table is accompanied by commentary that provides context and gives a brief interpretation of the data. The data are presented for all children in South Africa and, where possible, by province.

The indicators in this *South African Child Gauge* are a sub-set of the *Children Count* indicators. The project's website contains the full range of indicators and more detailed interactive data, as well as links to websites and useful documents. It can be accessed at www.childrencount.uct.ac.za.

Confidence intervals

Sample surveys are subject to error. The percentages simply reflect the mid-point of a possible range, but the true values could fall anywhere between the upper and lower bounds. The confidence intervals indicate the reliability of the estimate at the 95% level. This means that, if independent samples were repeatedly taken from the same population, we would expect the estimate to lie between upper and lower bounds of the confidence interval 95% of the time.

It is important to look at the confidence intervals when assessing whether apparent differences between provinces or subgroups are real: the wider the confidence interval, the more uncertain the estimate. Where confidence intervals overlap for different subpopulations or time periods, it is not possible to claim that there is a real difference in the estimates, even if the mid-point percentages differ. In the accompanying bar graphs, the confidence intervals are represented by vertical lines at the top of each bar ([]).

Data sources and citations

Children Count uses a few data sources. Most of the indicators are analysed by our team using data from the General Household Survey conducted by Statistics South Africa, while some draw on administrative databases used by government departments (Health, Education, and Social Development) to record and monitor the services they deliver.

Most of the indicators presented were developed specifically for this project. Data sources are carefully considered before inclusion, and the technical notes and strengths and limitations

of each are outlined on the project website. Here are a couple of examples of how to reference *Children Count* data correctly: When referencing from the *Demography* section in this publication, for example:

> Hall K (2018) Demography of South Africa's children. In: May J, Witten C & Lake L (eds) *South African Child Gauge 2020*. Cape Town: Children's Institute, University of Cape Town.

When referencing from the Housing and Services online section, for example:

> Hall K (2020) Housing and Services – Access to adequate water. *Children Count* website, Children's Institute, University of Cape Town. Accessed on 20 November 2020: www.childrencount.uct.ac.za

Each domain is introduced below, and key findings are highlighted.

Demography of South Africa's children

(pages 156 – 158)

This section provides child population figures and gives a profile of South Africa's children and their care arrangements, including children's co-residence with biological parents. There were 19.7 million children in South Africa in 2018 and 20% of children do not live with either of their biological parents.

Income poverty, unemployment and social grants

(pages 159 – 165)

In 2018, over half of children (59%) lived below the "upper bound" poverty line (with a per capita income below R1,183 per month), and 30% lived in households where no adults were employed. Social assistance grants are therefore an important source of income for caregivers to meet children's basic needs. In March 2020, nearly 12.8 million children received the Child Support Grant; 356,000 children received the Foster Child Grant; and a further 155,000 children received the Care Dependency Grant.

Child health

(pages 166 – 169)

This section monitors child health through a range of indicators. Under-five mortality has decreased from 42 deaths per 1,000 live births in 2012 to 34 deaths per 1,000 live births in 2018. The infant mortality rate has also declined slowly and is estimated at 25 deaths per 1,000 live births in 2018. The neonatal mortality rate, however, has not declined, remaining at 11 per 1,000 live births between 2012 and 2018. A fifth (20%) of children travel far to reach their primary health care facility and 77% of children are fully immunised in their first year.

Child nutrition

(pages 170 – 177)

Many children suffer the effects of food insecurity. Over 2 million (11%) live in households where children are reported to experience hunger and 27% of children younger than five years are stunted. This manifestation of chronic malnutrition has been persistent for many years, and is linked to low birthweight (15%), inadequate dietary intake and infection. At the same time, rates of obesity are rising and in 2016, 13% of children under five years were estimated to be overweight or obese. Exclusive breastfeeding for the first six months helps protect children from both under- and overnutrition, yet rates remain low at 32%.

Children's access to education

(pages 178 – 182)

South Africa has made significant strides in improving access to education with a reported attendance rate of 98% in 2018. Access is also increasing in the preschool years, with 92% of 5 – 6-year-olds attending some kind of educational institution or care facility. However, this does not necessarily translate into improved educational outcomes or progress through school. A third of young people aged 15 – 24 (34%) are not in employment, education or training, and there has been no improvement in this measure since 2002.

Children's access to housing

(pages 183 – 185)

This domain presents data on children living in rural or urban areas, and in adequate housing. The latest available data show that, in 2018, 57% of children were living in urban areas, and 83% of children lived in formal housing. Nearly one in ten children (1.7 million) lived in backyard dwellings and shacks in informal settlements, and one in six children (18%) lived in overcrowded households.

Children's access to basic services

(pages 186 – 188)

Without water and sanitation, children face substantial health risks that also compromise their nutritional status. In 2018, 70% of children had piped drinking water at home, and 79% have an adequate toilet on site – an improvement from 47% in 2002.

Demography of South Africa's children

Katharine Hall (Children's Institute, University of Cape Town)

The UN General Guidelines for Periodic Reports on the Convention on the Rights of the Child, paragraph 7, says that reports made by states should be accompanied by "detailed statistical information … Quantitative information should indicate variations between various areas of the country … and between groups of children …".[1]

The child population in South Africa

In mid-2018, South Africa's total population was estimated at 57.7 million people,[2] of whom 19.7 million were children under 18 years. Children therefore make up 34% of the total population.

The distribution of children across provinces is slightly different to that of adults, with a greater share of children living in provinces with large rural populations. Together, KwaZulu-Natal, the Eastern Cape and Limpopo accommodate almost half of all children in South Africa. Gauteng, the smallest province in terms of physical size, has overtaken KwaZulu-Natal to become the province with the largest child population: 21% of all children in the country live in Gauteng. Gauteng also has the largest share of the adult population (28%) and the largest share of households. The child population of Gauteng has grown by 42% since 2002, making it the fastest growing province.

There have also been striking changes in other provincial child populations since 2002. The number of children living in the Eastern Cape has decreased substantially (by 14%), while the number of children living in the Western Cape has risen by 22%. The North West has also seen a substantial increase of 19% in the child population since 2002. A rise in the child population is partly the result of population movement (for example, when children are part of migrant households or move to join existing urban households), and partly the result of natural population growth (new births within the province).

We can look at inequality by dividing all households into five equal groups or income quintiles, based on total income to the household (including earnings and social grants) and dividing that by the number of household members, with quintile 1 being the poorest 20% of households, quintile 2 being the next poorest and so on. Quintile 5 consists of the least-poor 20%. Two-thirds of children live in the poorest 40% of households (i.e. the poorest two quintiles).

The gender split is equal for children. In terms of the apartheid-era racial categories, 86% of children are African, 8% are Coloured, 4% White and 2% Indian.

These population estimates are based on the General Household Survey (GHS), which is conducted annually by Statistics South Africa. The GHS collects data on about 20,000 households and over 70,000 individuals. The population numbers derived from the survey are weighted to the mid-year population estimates using weights provided by Statistics South Africa. Using previously weighted data (the 2013 population model), it appeared that the child population had remained fairly stable, with a marginal reduction of 0.2% in the population size between 2002 and 2015. However, there was considerable uncertainty around the official population estimates, particularly in the younger age groups.[3] In 2017, Statistics South Africa updated the model and recalibrated the mid-year population estimates all the way back to 2002,[4] and re-released the data with new weights in 2018. The Children Count team reanalysed all the data retrospectively. Based on the recently revised weights it appears that the child population has grown by 8%, increasing from 18.1 milion in 2002 to 19.7 million in 2018.

Table 1a: Distribution of households, adults and children in South Africa, by province, 2018

Province	Households		Adults		Children		
	N	%	N	%	N	%	% change 2002 – 2018
Eastern Cape	1,685,149	10	3,994,247	11	2,514,000	13	-14%
Free State	901,319	5	1,869,794	5	1,021,000	5	2%
Gauteng	4,883,861	29	10,475,112	28	4,186,000	21	42%
KwaZulu-Natal	2,904,523	17	7,031,487	19	4,184,000	21	1%
Limpopo	1,578,772	9	3,479,374	9	2,374,000	12	-2%
Mpumalanga	1,288,862	8	2,850,795	8	1,673,000	8	10%
North West	1,209,525	7	2,542,741	7	1,382,000	7	19%
Northern Cape	341,651	2	793,830	2	436,000	2	10%
Western Cape	1,877,193	11	4,679,036	12	1,971,000	10	22%
South Africa	16,670,854	100	37,716,416	100	19,741,000	100	9%

Source: Statistics South Africa (2019) *General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

Children living with their biological parents

Many children in South Africa do not live consistently in the same household as their biological parents. This is a long established feature of childhoods in South Africa, and international studies have shown that the country is unique in the extent that parents are absent from children's daily lives.[5,6] Parental absence is related to many factors, including historic population control, labour migration, poverty, housing and educational opportunities, low marriage and cohabitation rates, as well as customary care arrangements.[7-11] It is common for relatives to play a substantial role in child-rearing. Many children experience a sequence of different caregivers, are raised without fathers, or live in different households to their biological siblings.

Parental absence does not necessarily mean parental abandonment. Many parents continue to support and see their children regularly even if they have to live elsewhere.[12-14]

Virtually all children live with at least one adult, and nearly 90% of children live in households where there are two or more co-resident adults. This indicator examines co-residence between children and their biological parents specifically. Although many children live with just one of their biological parents (usually the mother), this does not mean that the mother is a "single parent" as she is not necessarily the only adult caregiver in the household. In most cases, there are other adult household members such as aunts, uncles and grandparents who may contribute to the care of children.

The share of children living with both parents decreased from 39% in 2002 to 34% in 2018. Forty-three percent of all children (8.5 million children) live with their mothers but not with their fathers. Only 3% of children live in households where their fathers are present and their mothers absent. Twenty percent do not have either of their biological parents living with them. This does not necessarily mean that they are orphaned: most children without any co-resident parents have at least one parent who is alive but living elsewhere.

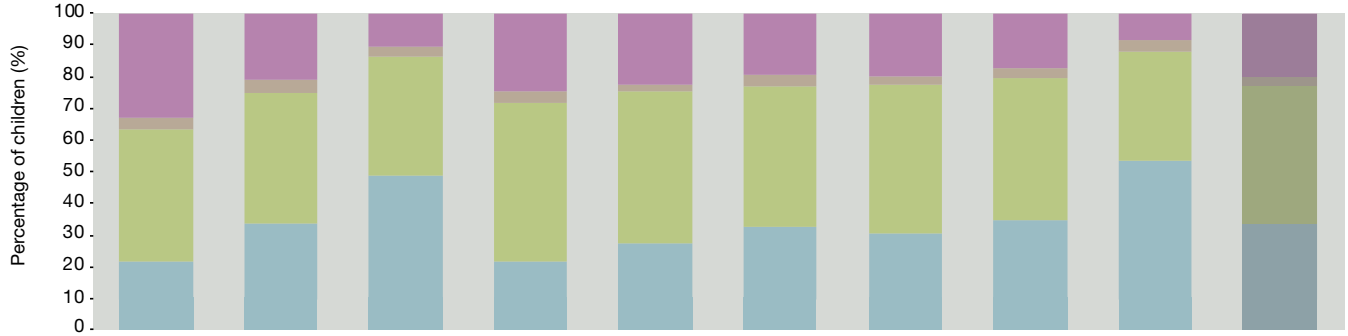
There is substantial provincial variation within these patterns. In the Western Cape and Gauteng, the share of children living with both parents is significantly higher than the national average, with around half of children resident with both parents (54% and 49%, respectively). Similarly, the number of children living with neither parent is relatively low in these two provinces (8% and 11%, respectively). In contrast, a third of children (33%) in the Eastern Cape live with neither parent. These patterns are consistent from 2002 to 2018.

Children in the poorest 20% of households are least likely to live with both parents: only 15% have both parents living with them, compared with 74% of children in the wealthiest 20% of households.

Less than one-third (29%) of African children live with both their parents, while the vast majority of Indian and White children (85% and 78%, respectively) reside with both biological parents. Almost a quarter of all African children do not live with either parent and a further 46% live with their mothers but not their fathers. These figures are striking for the way in which they suggest the limited presence of biological fathers in the home lives of large numbers of children.

Younger children are more likely than older children to have co-resident mothers, while older children are more likely to be living with neither parent. While 12% of children aged 0 – 5 years (875,000) live with neither parent, this increases to 27% (1.6 million) of children aged 12 – 17 years.

Figure 1a: Children living with their biological parents, by province, 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
Both parents	21.8%	33.9%	48.9%	21.8%	27.6%	32.5%	30.7%	34.8%	53.7%	33.8%
	548,000	346,000	2,047,000	910,000	655,000	544,000	424,000	152,000	1,059,000	6,677,000
Mother only	41.7%	41.2%	37.2%	49.8%	47.8%	44.7%	46.7%	44.8%	34.3%	43.1%
	1,048,000	421,000	1,556,000	2,082,000	1,135,000	747,000	646,000	195,000	677,000	8,510,000
Father only	3.5%	3.8%	3.2%	4.1%	1.8%	3.6%	2.7%	3.0%	3.6%	3.3%
	87,000	39,000	133,000	170,000	44,000	60,000	37,000	13,000	70,000	653,000
Neither parent	33.1%	21.1%	10.8%	24.4%	22.8%	19.2%	19.9%	17.3%	8.4%	19.8%
	831,000	216,000	450,000	1,022,000	541,000	322,000	275,000	76,000	165,000	3,902,000

Source: Statistics South Africa (2019) *General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

References

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Income poverty, unemployment and social grants

Katharine Hall (Children's Institute, University of Cape Town)

The Constitution of South Africa, section 27(1)(c), says that "everyone has the right to have access to … social security, including, if they are unable to support themselves and their dependants, appropriate social assistance".[1]

The UN Convention on the Rights of the Child, article 27, states that every child has the right "to a standard of living adequate for his or her development" and obliges the state "in case of need" to "provide material assistance". Article 26 guarantees "every child the right to benefit from social security".[2]

Children living in income poverty

This indicator shows the number and share of children living in households that are income-poor. As money is needed to access a range of services, income poverty is often closely related to poor health, reduced access to education and physical environments that compromise personal safety.

International law and the Constitution recognise the link between income and the realisation of basic human rights and acknowledge that children have the right to social assistance (social grants) when families cannot meet children's basic needs. Income poverty measures are therefore important for determining how many people need social assistance, and for evaluating the state's progress in realising the right to social assistance.

No poverty line is perfect. Using a single income measure tells us nothing about how resources are distributed between family members, or how money is spent. But this measure does give some indication of how many children are living in households with severely constrained resources.

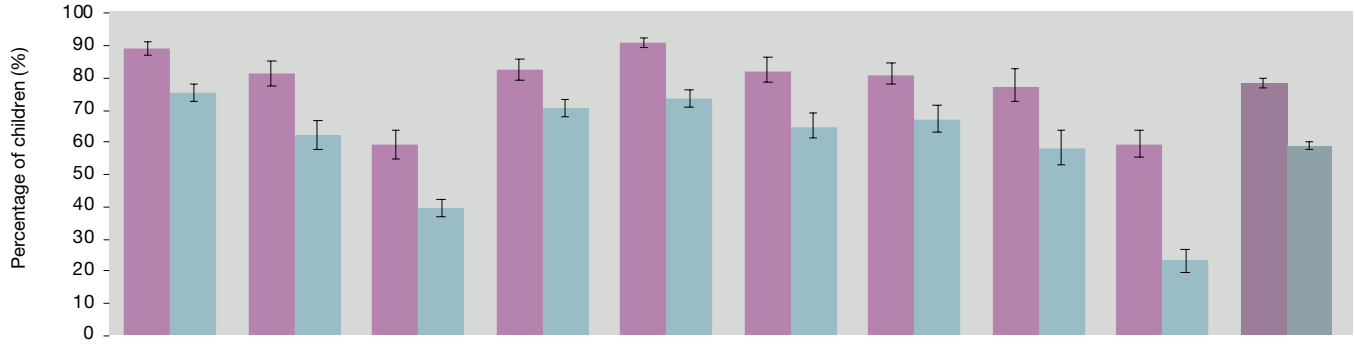
The measure used is the Statistics South Africa "upper-bound" poverty line that was set at R779 per person per month in 2011 prices. Poverty lines increase with inflation and in 2018 the real value of the upper-bound line was R1,183[3] (equivalent to R1,268 in 2020 prices). Per capita income is calculated by adding all reported income for household members older than 15 years, and social grants received by anyone in the household, and dividing the total household income by the number of household members.

Statistics South Africa proposed two other poverty lines:

- A "lower-bound" poverty line is calculated by adding to the food poverty line the average expenditure on essential non-food items by households whose food expenditure is below but close to the food poverty line. The value of the lower-bound poverty line was R785 in 2018 prices (R840 in 2020). *Those living below this line would not be able to pay for the minimum non-food expenses or would be sacrificing their basic nutrition in order to pay for non-food expenses.*
- A "food" poverty line is based on the cost of the minimum nutritional requirement of 2,100 kilocalories per person per day, without any allowance for non-food basic necessities. The value of the food poverty line was R547 per person per month in 2018 (R585 in 2020). *Anyone living below this line will be malnourished and their health and survival may be at risk.*

Figure 2a: Children living in income poverty, by province, 2003 & 2018

(Upper-bound poverty line: Households with monthly per capita income less than R1,183, in 2018 rands)



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2003	89.0%	81.1%	59.1%	82.3%	90.8%	82.0%	81.1%	77.4%	59.4%	78.3%
	2,544,000	813,000	1,759,000	3,349,000	2,165,000	1,237,000	941,000	302,000	961,000	14,070,000
2018	75.2%	62.4%	39.5%	70.7%	73.5%	64.9%	67.1%	58.3%	23.4%	58.8%
	1,890,000	637,000	1,655,000	2,960,000	1,744,000	1,086,000	927,000	254,000	461,000	11,615,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

We use the upper-bound poverty line as our main indicator for tracking child poverty as this is linked to the minimum requirement for basic nutrition as well as other basic needs such as clothing and shelter. In other words, this is the only poverty line that meets the minimum requirement for children's basic needs.

South Africa has very high rates of child poverty. In 2018, 59% of children lived below the upper-bound poverty line. Income poverty rates have fallen substantially since 2003, when 78% (14.1 million) children were defined as "poor" at this income threshold. The reduction in the child poverty headcount is partly the result of a massive expansion in the reach of the Child Support Grant over the same period. Although there have been reductions in the child poverty rate, large numbers of children still live in poverty: in 2018, 11.6 million children lived below the upper-bound poverty line.

There are substantial differences in poverty rates across the provinces. Using the upper-bound poverty line, around three-quarters of children in the Eastern Cape and Limpopo are poor, and the child poverty rate in KwaZulu-Natal is 71%. Gauteng and the Western Cape have the lowest child poverty rates – at 40% and 23% respectively. Child poverty remains most prominent in the rural areas of the former homelands, where 81% of children are below the poverty line. The urban child poverty rate, by contrast, is 44%.

There are glaring racial disparities in income poverty: while 65% of African children lived in poor households in 2018, and 31% of Coloured children were defined as poor, only 3% of White children lived below this poverty line. There are no significant differences in child poverty levels across gender or between different age groups in the child population.

Using Statistics South Africa's lower-bound poverty line (which does not provide enough for basic essentials), 45% of children (8.9 million) were poor in 2018, and 33% (6.4 million children) were below the food poverty line, meaning that they were not getting enough nutrition.

The international ultra-poverty line used to track progress towards the Sustainable Development Goals (SDGs) is $1.90 per person per day. This translated to R361 per person per month in 2018, using the IMF purchasing power parity conversion. This poverty line is extremely low – below survival level – and is not appropriate for South Africa. No child should be below it. In 2003, 52% of children (9.3 million) lived below the equivalent of the SDG poverty line. By 2018, this decreased to 20% (4 million).

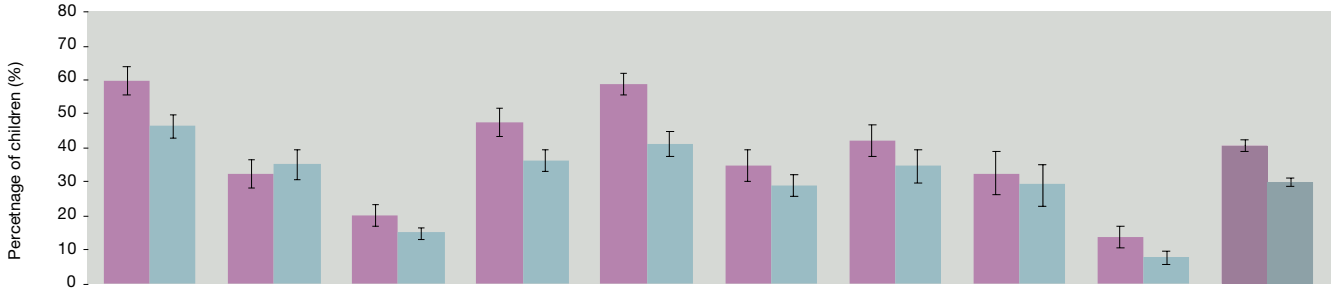
The Sustainable Development Goals replaced the Millennium Development Goals in 2015 and set the global agenda for development by 2030. Target 1.1 is to eradicate extreme poverty using the international poverty line of $1.90 per person per day. Target 1.2 is that by 2030 countries should reduce by at least half the proportion of men, women and children of all ages living in poverty in all its dimensions, according to national definitions. This would equate to reducing the number of children below the upper-bound poverty line by at least 2 million.

Children living in households without an employed adult

This indicator measures unemployment from a children's perspective and gives the number and proportion of children who live in households where no adults are employed in either the formal or informal sector. It therefore shows the proportion of children living in "unemployed" households where it is unlikely that any household members derive income from labour or income-generating activities.

Unemployment in South Africa continues to be a serious problem. The official national unemployment rate was 27.5% in the third quarter of 2018.[4] This rate is based on a narrow definition of unemployment that includes only those adults who are defined as economically active (i.e. they are not studying or retired or voluntarily staying at home) and who actively looked but failed to find work in the four weeks preceding the survey. An expanded definition of unemployment, which includes "discouraged work-seekers" who were unemployed but not actively looking for work in the month preceding the survey, would give a higher, more accurate, indication of unemployment. The expanded

Figure 2b: Children living in households without an employed adult, by province, 2003 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2003	59.7%	32.4%	20.3%	47.6%	58.7%	34.9%	42.2%	32.6%	13.9%	40.8%
	1,706,000	325,000	603,000	1,935,000	1,400,000	527,000	490,000	127,000	225,000	7,338,000
2018	46.3%	35.2%	15.1%	36.3%	41.3%	29.1%	34.8%	29.3%	8.0%	29.9%
	1,165,000	360,000	632,000	1,518,000	981,000	487,000	480,000	128,000	158,000	5,909,000

Source: Statistics South Africa (2004; 2019) General Household Survey 2003; General Household Survey 2018. Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

unemployment rate (which includes those who are not actively looking for work) was 37.3%. Gender differences in employment rates are relevant for children, as it is mainly women who provide for children's care and material needs. Unemployment rates remain higher for women (41.2%) than for men (33.9%), using the expanded definition.[4] By the end of 2019 the official (narrow) unemployment rate had increased to 29.1% and the expanded unemployment rate was 38.7%.[5] It was against this baseline that Covid-19 lockdown took place, with the ensuing job losses and lack of protection for the millions of households that did not have access to UIF.

Apart from providing regular income, an employed adult may bring other benefits to the household, including health insurance, unemployment insurance and parental leave that can contribute to children's security, health, development and education. The definition of "employment" is derived from the Quarterly Labour Force Survey and includes regular or irregular work for wages or salary, as well as various forms of self-employment, including unpaid work in a family business.

In 2018, 70% of children in South Africa lived in households with at least one working adult. The other 30% (5.9 million children) lived in households where no adults were working. The number of children living in workless households has decreased by 1.4 million since 2003, when 41% of children lived in unemployed households.

This indicator is very closely related to the income poverty indicator in that provinces with relatively high proportions of children living in unemployed households also have high rates of child poverty. Over 40% of children in the Eastern Cape and Limpopo live in households without any employed adults. These two provinces are home to large numbers of children and have the highest rates of child poverty. In contrast, Gauteng and the Western Cape have the lowest poverty rates, and the lowest unemployment rates. In the Western Cape, only 8% of children live in households where nobody is working.

Racial inequalities are striking: 33% of African children have no working adult at home, while 13% of Coloured children, 10% of Indian children and 2% of White children live in these circumstances. There are no significant differences in child-centred unemployment measures when comparing girls and boys or between age groups. In the rural former homelands, 48% of children live in households where nobody works.

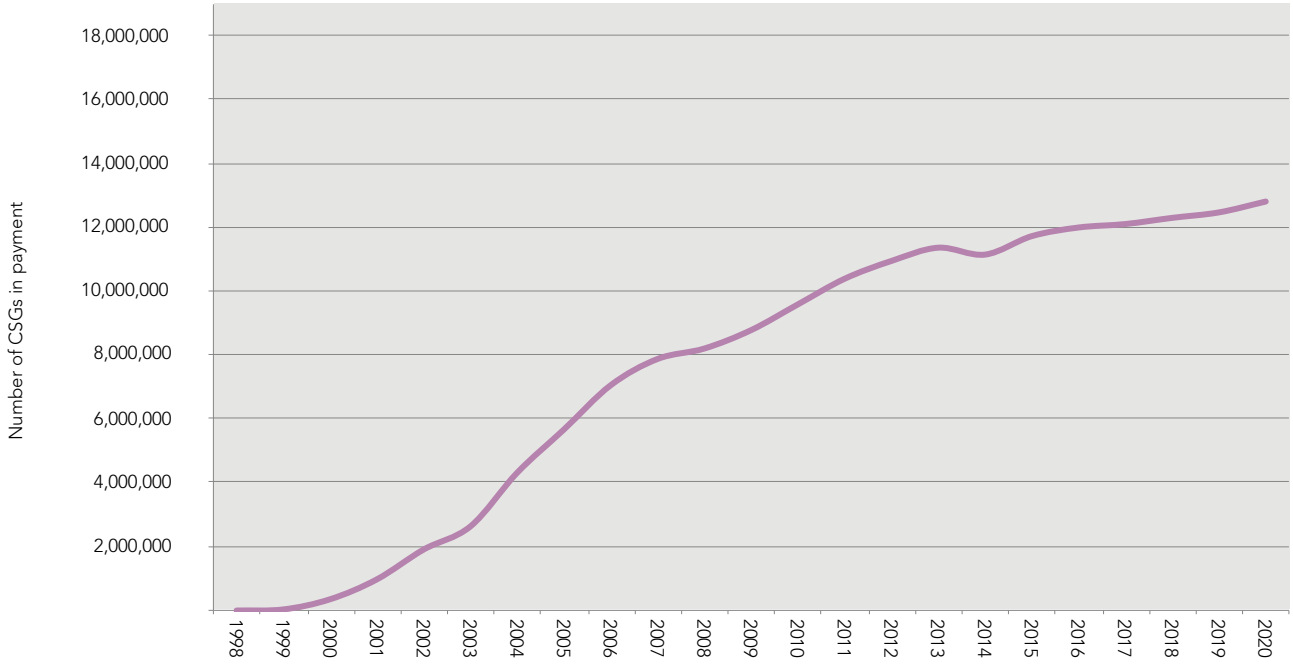
Income inequality is clearly associated with unemployment. Over two-thirds of children in the poorest income quintile (5.2 million) live in households where no adults are employed.

Children receiving the Child Support Grant

This indicator shows the number of children receiving the Child Support Grant (CSG), as reported by the South African Social Security Agency (SASSA) which disburses social grants on behalf of the Department of Social Development. The right to social assistance is designed to ensure that people living in poverty can meet basic subsistence needs. Government is obliged to support children directly when their parents or caregivers are too poor to do so. Income support is provided through social assistance programmes such as the CSG, which is an unconditional cash grant paid to the caregivers of eligible children.

Introduced in 1998 with an initial value of R100, the CSG has become the single biggest programme for alleviating child

Figure 2c: Children receiving the Child Support Grant, 1998 – 2020



Sources: 1998 – 2007: National Treasury Intergovernmental Fiscal Reviews.
2008 – 2020: South African Social Security Agency SOCPEN monthly reports, by special request.

Table 2a: Children receiving the Child Support Grant, by province and age group, 2020

Province	Number of child beneficiaries and adult recipients at end March 2020				
	0 – 5 years	6 – 11 years	12 – 17 years	Total CSGs to children	CSG recipients (caregivers)
Eastern Cape	623,641	698,557	619,416	1,941,614	1,059,940
Free State	228,574	255,316	222,030	705,920	410,948
Gauteng	658,061	711,156	575,211	1,944,428	1,134,642
KwaZulu-Natal	968,771	1,036,839	907,430	2,913,040	1,598,413
Limpopo	690,033	672,750	532,822	1,895,605	1,021,765
Mpumalanga	393,401	400,656	338,926	1,132,983	627,527
North West	300,564	318,156	261,806	880,526	481,274
Northern Cape	112,241	114,110	95,093	321,444	175,568
Western Cape	338,149	388,768	321,847	1,048,764	626,653
South Africa	4,313,435	4,534,425	3,666,846	12,784,324	7,136,730

Source: South African Social Security Agency (2020) SOCPEN database – special request. Pretoria: SASSA.

poverty in South Africa. Take-up of the CSG has increased dramatically over the years and the grant amount is increased slightly each year, more or less keeping pace with overall inflation. At the end of March 2020, a monthly CSG of R440 was paid to just over 12,784,000 children aged 0 – 17 years. It was received by just over 7.1 caregivers on behalf of the children in their care. The CSG received a top-up of R300 per grant for one month during lockdown (May 2000). From June it reverted to its previous value of R440 and instead a caregiver allowance of R500 per CSG caregiver was introduced for five months from June to October 2020. The value of the CSG increased to R450 per month from the beginning of October 2020, as planned and announced in the February 2020 budget speech.

There have been two important changes in eligibility criteria over the years. The first concerns age eligibility. Initially the CSG was only available for children younger than seven years. From 2003 it was gradually extended to older children up to the age of 14. Since January 2012, following a second phased extension, children have been eligible for the grant until they turn 18.

The second important change concerns the income threshold or means test. The income threshold remained static for 10 years until a formula was introduced – set at 10 times the amount of the grant. This means that every time the grant is increased, the means test also increases. From April 2020 the income threshold was R4,400 per month for a single caregiver and R8,800 per month for the joint income of the caregiver and spouse, if the caregiver is married. These thresholds increased to R4,500 and R9,000 per month respectively in October.

There is substantial evidence that grants, including the CSG, are being spent on food, education and basic goods and services. This evidence shows that the grant not only helps to alleviate income poverty and realise children's right to social assistance, but is also associated with improved nutritional, health and education outcomes.[6-15]

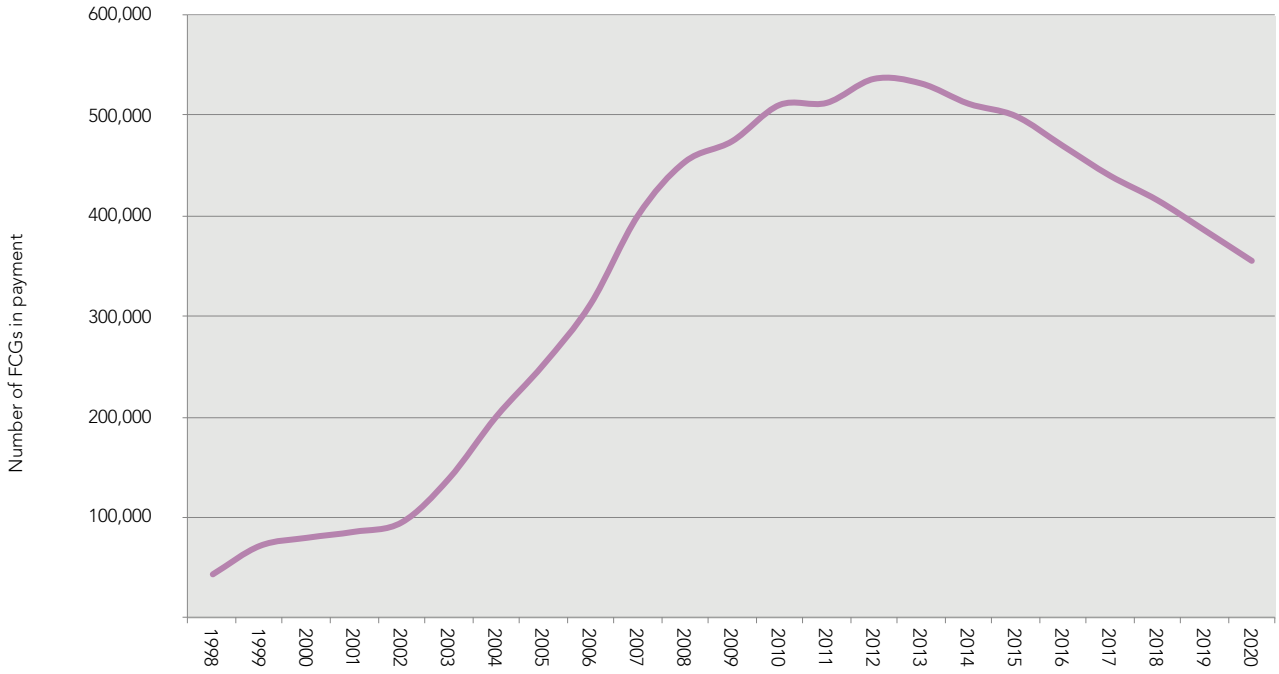
Given the positive and cumulative effects of the grant, it is important that caregivers can access it for their children as early as possible. One of the main concerns is the slow take-up for young children. An analysis of exclusions from the CSG found that exclusion rates for eligible infants under a year were as high as 43% in 2014, up only three percentage points from 47% in 2008. Exclusion rates were found to be highest in the Western Cape and Gauteng. The total rate of exclusion for all ages was estimated at 17.5% (more than 1.8 million children).[16] Barriers to take-up include confusion about eligibility requirements and the means test in particular; lack of documentation (mainly identity books or birth certificates, and proof of school enrolment, although the latter is not an eligibility requirement) and problems of institutional access (including the time and cost of reaching SASSA offices, long queues and lack of baby-friendly facilities).

Children receiving the Foster Child Grant

This indicator shows the number of children who are accessing the Foster Child Grant (FCG) in South Africa, as recorded in the SOCPEN administrative data system of the SASSA.

The FCG is available to foster parents who have a child placed in their care by an order of the court. It is a non-contributory cash grant valued at R1,040 per month from April 2020. The grant was initially intended as financial support for children removed from their families and placed in foster care for protection in situations of abuse or neglect. The relatively large value of the grant, compared to the CSG, is justified on the basis that the child is technically a ward of the state, and the state is therefore directly responsible for all the child's needs. However, the FCG has increasingly been used to provide financial support to caregivers of children who are orphaned and has effectively

Figure 2d: Children receiving the Foster Child Grant, 1998 – 2020



Sources: 1998 – 2007: National Treasury Intergovernmental Fiscal Reviews.
2008 – 2020: South African Social Security Agency SOCPEN monthly reports, by special request.

been used as a poverty alleviation grant for orphans in kinship care. The appropriateness and effectiveness of this approach was questioned as far back as 2003, particularly because many children live with kin, whether or not their parents are alive.[17]

The number of FCGs remained stable for many years when foster care applied mainly to children who were in need of care and protection because of abuse or neglect, or because they were awaiting adoption. Its rapid expansion since 2003 coincided with the rise in HIV-related orphaning and an implied policy change by the Department of Social Development, which from 2003 started encouraging family members (particularly grandmothers) caring for orphaned children to apply for foster care and the FCG. During the subsequent five years, the number of FCGs increased by over 50,000 per year as orphans were brought into the foster care system. The increases were greatest in provinces with large numbers of orphaned children: the Eastern Cape, KwaZulu-Natal, Limpopo and Mpumalanga.

However, by 2010 more than 500,000 FCGs were in payment and the foster care system was struggling to keep pace with the numbers due to the required initial investigations and reports by social workers, court-ordered placements, and additional two-yearly social worker reviews and court-ordered extensions. SASSA is not allowed to pay the FCG without a valid court order or extension order, and more than 110,000 FCGs lapsed between April 2009 and March 2011 because of backlogs in the extensions of court orders.[18-20]

In 2011 a court-ordered settlement stipulated that the foster care court orders that had expired – or that were going to expire in the following two years – must be deemed to have been extended until 8 June 2013. This effectively placed a moratorium on the lapsing of these FCGs. As a temporary solution, social workers could extend orders administratively until December 2014, by which date a comprehensive legal solution should have been found to prevent qualifying families from losing their grants in future.[21] Yet no policy solution had been developed by the 2014 cut-off date. Instead, the Department of Social Development sought (and received) an urgent court order extending the date to the end of 2017, which was then extended again by two year until the end of November 2019, and then by another year until the end of 2020. By this time, a legal solution must be found or thousands of children in foster care stand to lose their grants.

Since 2012 the number of FCGs has declined by 34%, and there has been a substantial increase in the number of grants that terminate at the end of each year, when children turn 18. At the end of 2014, 300,000 court orders had expired, representing more than 60% of all foster care placements.[22] The grants remained in payment only because of a High Court order which prevented them from lapsing. In March 2020, 356,000 FCGs were paid to caregivers of children in foster care, substantially down from 2012 when 537,000 grants were in payment. The FCG is therefore now back to below 2007 levels.

It is not possible to calculate a take-up rate for the FCG as there is no accurate record of how many children are eligible for placement in foster care – and indeed, no clear guidelines about how it should be targeted in the context of high orphaning rates. If all double orphans were to be placed in foster care, this would require around 470,000 foster care placements, excluding those who need to be placed in foster care because they are awaiting adoption or have been removed from their families for reasons of abuse or neglect. This would once again send the number of children in foster care well above half a million – which the system has not previously been able to support.

Table 2b: Children receiving the Foster Child Grant, by province, 2012 & 2020

Province	2012	2020	Difference	% difference
Eastern Cape	116,826	81,128	-35,698	-31%
Free State	43,311	26,116	-17,195	-40%
Gauteng	56,451	43,355	-13,096	-23%
KwaZulu-Natal	142,114	66,722	-75,392	-53%
Limpopo	56,066	42,317	-13,749	-25%
Mpumalanga	32,886	24,512	-8,374	-25%
North West	45,634	11,211	-34,423	-75%
Northern Cape	14,456	28,495	14,039	97%
Western Cape	29,003	31,754	2,751	9%
South Africa	536,747	355,610	-181,137	-34%

Source: South African Social Security Agency (2012; 2020) SOCPEN database, by special request. Pretoria: SASSA.

The systemic problems that caused FCGs to lapse and reduced social worker capacity to respond to children in need of protection services will need to be addressed through a legislative amendment to clarify the eligibility criteria for foster care. An option still under consideration is to provide a larger CSG for orphaned children living with kin (colloquially called the "CSG top-up"). This would create inequalities in grant values between different categories of children living in the same levels of poverty but may alleviate the pressure on welfare services caused by high foster care caseloads.[23] An amendment to the Social Assistance Act was tabled in Parliament in April 2018, providing for a CSG top-up for orphaned children living with kin. A Social Assistance Amendment Bill was tabled in parliament in 2020. The Bill provides for a CSG top-up that would give orphaned children living with relatives access to a larger child grant without first having to go through a foster care placement.

Children receiving the Care Dependency Grant

This indicator shows the number of children who are accessing the Care Dependency Grant (CDG) in South Africa, as recorded in the SOCPEN administrative data system of the SASSA.

The CDG is a non-contributory monthly cash transfer to caregivers of children with disabilities who require permanent care or support services. It excludes those children who are cared for in state institutions because the purpose of the grant is to cover the additional costs (including opportunity costs) that the parent or caregiver might incur as a result of the child's disability. The child needs to undergo a medical assessment to determine eligibility and the parent must pass an income or "means" test.

Although the CDG targets children with disabilities, children with chronic illnesses are eligible for the grant once the illness becomes disabling, for example children who are very sick with AIDS-related illnesses. Children with disabilities and chronic illnesses need substantial care and attention, and parents may need to stay at home or employ a caregiver to tend to the child. Children with health conditions may need medication, equipment or to attend hospital often. These extra costs can put strain on families that are already struggling to make ends meet. Poverty and chronic health conditions are therefore strongly related.

It is not possible to calculate a take-up rate for the CDG because there are no reliable data on the number of children with disabilities or who are chronically ill, and in need of permanent care or support services. At the end of March 2020, 155,000

Table 2c: Children receiving the Care Dependency Grant, by province, 2020

Province	Children
Eastern Cape	22,784
Free State	8,439
Gauteng	19,835
KwaZulu-Natal	39,716
Limpopo	16,012
Mpumalanga	11,580
North West	9,916
Northern Cape	5,959
Western Cape	15,763
South Africa	150,004

Source: South African Social Security Agency (2020) SOCPEN database, by special request. Pretoria: SASSA.

children were receiving the CDG, and from the beginning of April 2020, the grant was valued at R1,860 per month. The provincial distribution of CDGs is fairly consistent with the distribution of children. The provinces with the largest numbers of children – KwaZulu-Natal, the Eastern Cape and Gauteng – receive the largest share of CDGs. There has been a gradual but consistent increase in access to the CDG each year since 1998, when only 8,000 CDGs were disbursed.

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Child health

Katharine Hall, Nadine Nannan and Winnie Sambu

Section 27 of the Constitution of South Africa provides that everyone has the right to have access to health care services. In addition, section 28(1)(c) gives children "the right to basic nutrition and basic health care services".[1]

Article 14(1) of the African Charter on the Rights and Welfare of the Child states that "every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health".[2]

Article 24 of the UN Convention on the Rights of a Child says that state parties should recognise "the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health". It obliges the state to take measures "to diminish infant and child mortality" and "to combat disease and malnutrition".[3]

The infant and under-five mortality rate

The infant and under-five mortality rates are key indicators of heath and development. They are associated with a broad range of bio-demographic, health and environmental factors which are not only important determinants of child health but are also informative about the health status of the broader population.

The infant mortality rate (IMR) is defined as the probability of dying within the first year of life and refers to the number of babies under 12 months who die in a year per 1,000 live births during the same year. Similarly, the under-five mortality rate (U5MR) is defined as the probability of a child dying between birth and their fifth birthday. The U5MR refers to the number of children under five years old who die in a year per 1,000 live births in the same year.

This information is ideally obtained from civil and vital registration (CRVS) systems. The Rapid Mortality Surveillance (RMS) Report based on the deaths recorded on the population register by the Department of Home Affairs.[4] has been providing national empirical estimates of mortality indicators since 2012. The RMS data have been recommended by the Health Data Advisory and Co-ordinating Committee because corrections have been made for known biases. In other words, the indicators shown in Table xx are nationally representative. The RMS reports vital registration data adjusted for under-reporting which allows for the evaluation of annual trends. They suggest the IMR peaked in 2003 when it was 53 per 1,000 and decreased to 25 per 1,000 in 2018. During the same period the U5MR decreased from 81 per 1,000 to 34 per 1,000. Although infant and under-five mortality rates decreased until 2017, there was a slight increase in both rates between 2017 and 2018. The current trends are therefore somewhat uncertain.

The neonatal mortality rate (NMR) is the probability of dying within the first 28 days of life per 1,000 live births. The NMR was 11 deaths per 1,000 live births in 2018. Estimates of the NMR are derived directly from vital registration data (i.e. registered deaths and births without adjustment for incompleteness) up to 2013, and from 2013 onwards the estimates were derived directly from neonatal deaths and live births recorded in the District Health Information System.

Table 3a: Child mortality indicators, rapid mortality surveillance, 2012 – 2018

INDICATOR	2012	2013	2014	2015	2016	2017	2018
Under-five mortality rate per 1,000 live births	42	43	42	39	36	33	34
Infant mortality rate per 1,000 live births	28	29	29	28	26	23	25
Neonatal mortality	11	11	12	12	12	12	11

Source: Dorrington RE, Bradshaw D, Laubscher R & Nannan, N (2020) *Rapid Mortality Surveillance Report 2018*. Cape Town: South African Medical Research Council.

The South African Demographic and Health Survey (SADHS) also reports child mortality rates. After a long gap (since 2003) the SADHS was conducted again in 2016.[5] For the period 2012 – 2016, the RMS estimated a slightly higher overall under-five mortality rate than the SADHS – 42 versus 39 per 1,000 live births. However, the SADHS infant mortality rate (IMR) for recent years is much higher than the IMR from the RMS (35 versus 27 per 1,000 live births for the period 2012 – 2016). The SADHS estimates are likely to be too high because its neonatal mortality rate is too high.

Children living far from their health facility

This indicator reflects the distance from a child's household to the health facility they normally attend. Distance is measured as the length of time travelled to reach the health facility, by whatever form of transport is usually used. The health facility is regarded as "far" if a child would have to travel more than 30 minutes to reach it, irrespective of mode of transport.

A review of international evidence suggests that universal access to key preventive and treatment interventions could

avert up to two-thirds of under-five deaths in developing countries.[6] Preventative measures include the promotion of breast and complementary feeding, micronutrient supplements (vitamin A and zinc), immunisation, and the prevention of mother-to-child transmission of HIV, amongst others. Curative interventions provided through the government's Integrated Management of Childhood Illness strategy include oral rehydration, infant resuscitation and the dispensing of medication.

According to the UN Committee on Economic, Social and Cultural Rights, primary health care should be available (in sufficient supply), accessible (easily reached and affordable), acceptable and of good quality.[7] In 1996, primary level care was made free to everyone in South Africa, but the availability and physical accessibility of health care services remain a problem, particularly for people living in remote areas.

Physical inaccessibility poses particular challenges when it comes to health services because the people who need these services are often unwell or injured or need to be carried because they are too young, too old or too weak to walk. Physical inaccessibility can be related to distance, transport options and costs, or road infrastructure. Physical distance and poor roads also make it difficult for mobile clinics and emergency services to reach outlying areas. Within South Africa, the extent to which patients use health care services is influenced by the distance to the health service provider: those who live further from their nearest health facility are less likely to use the facility. This "distance decay" is found even in the uptake of services that are required for all children, including immunisation and maintaining the Road-to-Health Book.[8]

A fifth (20%) of South Africa's children live far from the primary health care facility they normally use, and 94% attend the facility closest to their home. Within the poorest 20% of households, only 3% do not use their nearest facility, while 14% of children in the wealthiest quintile travel beyond their nearest health facility to seek medical attention. The main reasons for attending a remote health service relate to perceptions of service quality; a preference for private health services (37%), and other complaints including long waiting times (16%); the unavailability of medication (6%) and rude or uncaring staff (4%). Cost considerations also inform choices, and 11% of households that did not use their nearest facility chose to travel further in order to access cheaper medical care or free government health services.[9]

In total, 3.9 million children travel more than 30 minutes to reach their usual health care service provider. This is a significant improvement since 2002, when 36% (or 6.6 million children) lived far from their nearest clinic.

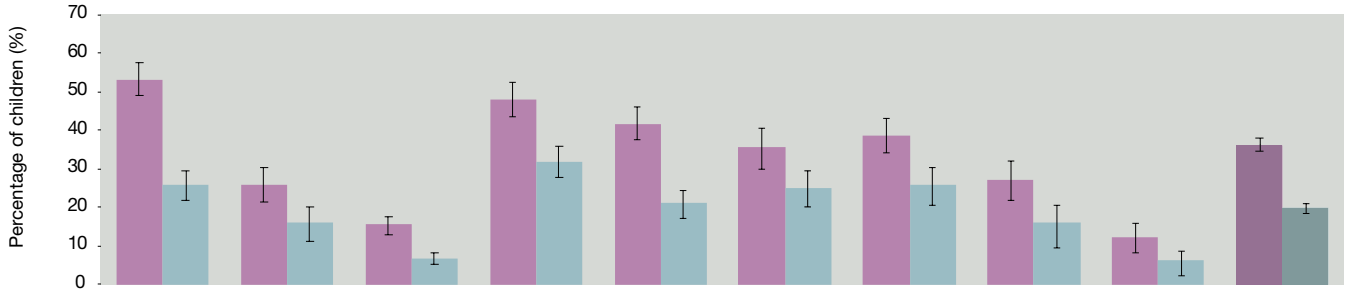
It is encouraging that the greatest improvements in access have been made in provinces which performed worst in 2002: the Eastern Cape (where the share of children with poor access to health facilities dropped from 53% in 2002 to 26% in 2017), KwaZulu-Natal (down from 48% to 32%), Limpopo (from 42% to 21%) and North West (from 39% to 26%). Provinces with the highest rates of access are the largely metropolitan provinces of the Western Cape (where only 6% of children live more than 30 minutes from their usual health care service) and Gauteng (7%).

There are also significant differences between population groups. A quarter (22%) of African children travel far to reach a health care facility, compared with between 4% and 9% of Indian, White and Coloured children. Racial inequalities are amplified by access to transport: if in need of medical attention, 93% of White children would be transported to their health facility in a private car, compared with only 11% of African children. Only 2% of the poorest children (quintile 1) travel to their health facility in a private car, while nearly 60% walk.

Poor children bear the greatest burden of disease, due to undernutrition and poorer living conditions and access to services (water and sanitation). Yet health facilities are least accessible to the poor. More than a quarter of children (29%) in the poorest 20% of households have to travel far to access health care, compared with 7% of children in the richest quintile.

There are no significant differences in patterns of access to health facilities when comparing children of different sex and age groups.

Figure 3a: Children living far from their health facility, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	53%	26%	15%	48%	42%	35%	39%	27%	12%	36%
	1,559,000	259,000	453,000	1,988,000	1,010,000	538,000	451,000	108,000	199,000	6,568,000
2018	26%	16%	7%	32%	21%	25%	26%	16%	6%	20%
	650,000	164,000	282,000	1,333,000	500,000	421,000	355,000	69,000	122,000	3,902,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

Immunisation coverage of children

This indicator shows the percentage of children younger than one year who are fully immunised. "Full immunisation" refers to children having received all the required doses of vaccines given in the first year of life.

Immunisation is one of the most effective preventative health care interventions to prevent serious illnesses and death in young children. It entails giving injections or drops to young children that protect them against potentially life-threatening illnesses such as tuberculosis, polio, hepatitis and measles. South Africa has an up-to-date immunisation programme, in keeping with world standards.

The Expanded Programme on Immunisation (EPI) in South Africa was last updated in 2015.

The revised EPI schedule for public health facilities providing services to children in the first year of life includes immunisation at birth, and then at 6 weeks, 10 weeks, 14 weeks and 9 months.[10] Thus, by the time of their first birthday, all babies should have visited a health facility at least four times after birth for immunisation services, and these immunisations should be recorded in the child's Road-to-Health booklet.

Immunisation coverage serves as a good indicator of the extent to which young children access primary health care services. Immunisation coverage is also a proxy for the extent to which children access other health services, as the immunisation schedule provides a point of contact for identifying other health problems and for scheduling preventative child health interventions. Examples of these are the vitamin A supplementation programme, developmental screening, and prophylaxis for babies born to HIV-positive mothers.

Immunisation rates are tracked in the District Health Information System and are calculated as the number of children who have received complete immunisation divided by the child population within that district. The percentages obtained in this way will be influenced by population movement in health seeking behaviour – for example, if children from one district are taken to a health facility in a neighbouring district. This has sometimes resulted in some districts, and even provinces, reporting immunisation rates of over 100%.

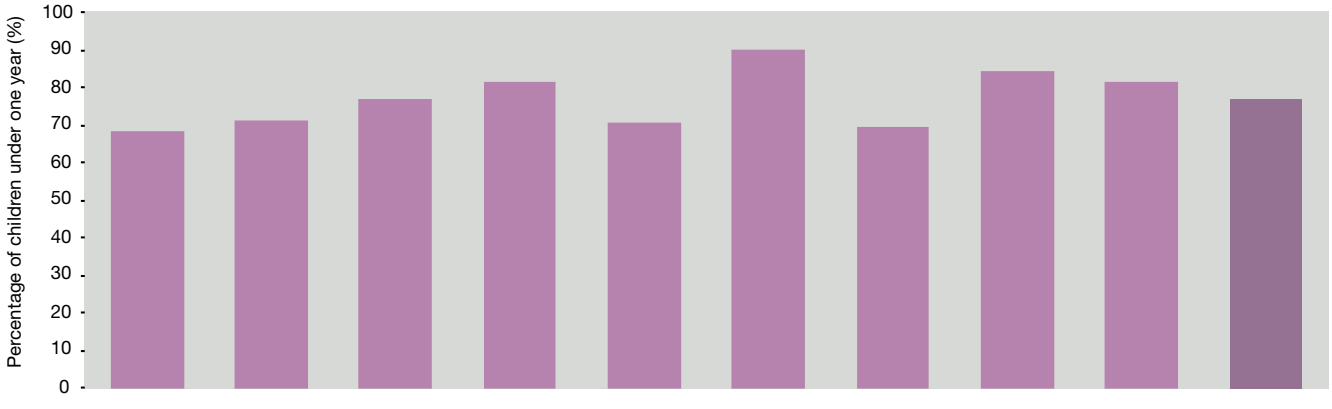
The immunisation rates are also affected by national (and district-level) estimates of population size.

The 2015/16 immunisation rate, as reported in the 2017 District Health Barometer, reflected high levels of immunisation for infants under a year, at 89.2%.[11] Since then, Statistics South Africa revised its model to derive the mid-year population estimates, and it was found that the number of children in the country had previously been underestimated.[12] The 2015/16 immunisation rate was revised downwards to 79.5%. The 2016/17 rate had dropped even before the new population estimates were released, to 82.3% and after retrospective adjustment to the revised population estimates, the rate for that year was calculated at 71.2%. The lower immunisation rate for that year was attributed to a global shortage of Hexavalent vaccine.[10] In 2017/18 the immunisation rate was estimated at 77%. The immunisation rates in the District Health Barometer have not been adjusted retrospectively before 2015, and so it is not possible to determine long-term trends in immunisation uptake.

The highest immunisation rates for 2017/18 were in Mpumalanga (90%), the Northern Cape (85%), KwaZulu-Natal (82%) and the Western Cape (81%) – all of which exceeded the national average of 77%. Eastern Cape and North West had the lowest immunisation rate (69%).

The challenge of national and provincial aggregates is that they can mask differences between districts and hide areas with low coverage. District coverage is available in the 2017/18 District Health Barometer where 29 of the 52 districts show coverage below the national average. Coverage for individual districts demonstrates significant inter-district inequities in service access for young children – ranging from a low coverage rate of 56% in the Sarah Baartman District Municipality of the Eastern Cape, to 98% in the eThekwini Metropolitan Municipality in KwaZulu-Natal. Low coverage rates are concentrated mainly in poorer districts, where health needs may be greatest.

Figure 3b: Immunisation coverage of babies younger than one year, by province, 2017/18



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2017/18	68.5%	71.3%	77.3%	81.7%	70.7%	90.4%	69.4%	84.5%	81.4%	77.0%

Source: Department of Health (2019) District Health Information System. Reported in: Massyn N, Pillay Y & Padarath A (eds) *District Health Barometer 2017/2018*. Durban: Health Systems Trust.

Effective immunisation requires high levels of coverage to achieve a certain level of immunity within the broader community. This is known as 'herd immunity' and it means that, if immunisation coverage has reached a high enough level, even the most vulnerable who have not been immunised in that community will be protected – including young children and those with low immunity.

Even though immunisation is freely available, and the goal is for it to be universal, it is voluntary and there is growing evidence that some parents choose not to immunise their children. A "worldwide increase in vaccine hesitancy and refusal" has been described as a threat to the public health achievements in controlling and preventing infectious diseases.[13] At a country level, vaccine sentiment and voluntary compliance is inversely correlated with socio-economic status (i.e. compliance is lower in wealthy countries than in poorer ones).[13]

The completion rates for "basic immunisation" (BCG, three doses of STaP-IPV-Hib, and one dose of measles vaccine) in the South African Demographic and Health Survey of 2016 were substantially lower than those recorded in the District Health Information System (at 61%, compared with 77%). The reason for this discrepancy is not clear, but it is important to note that compliance was highest in the poorest wealth quintile (66%) while the richest quintile was lower, at 60%.[5] This suggests an inverse correlation between socio-economic status and immunisation in South Africa, a highly unequal country.

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Child nutrition

Winnie Sambu

Section 28(1)(c) of the Constitution of South Africa gives children the right to basic nutrition.[1]

Article 14(1) of the African Charter on the Rights and Welfare of the Child states that "every child shall have the right to enjoy the best attainable state of physical, mental and spiritual health", and article 14(2)(c) says that State Parties shall take measures "to ensure the provision of adequate nutrition…".[2]

Article 24 of the UN Convention on the Rights of a Child says that State Parties should recognise "the right of the child to the enjoyment of the highest attainable standard of health" and obliges the State to take measures "to combat disease and malnutrition… through, inter alia… the provision of adequate nutritious foods and clean drinking water…".[3]

Children living in households where there is reported child hunger

This indicator shows the number and proportion of children living in households where children are reported to go hungry "sometimes", "often" or "always" because there isn't enough food.

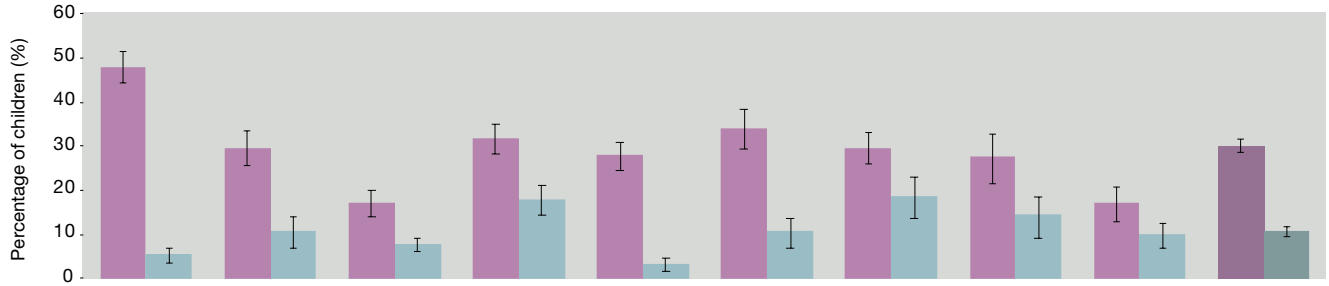
Section 28(1) (c) of the Bill of Rights in the Constitution gives every child the right to basic nutrition. The fulfilment of this right depends on children's access to sufficient food. There are a number of ways in which access to food can be monitored. At a global level, the Food and Agriculture Organization (FAO) regularly publishes estimates of the prevalence of undernourishment, which is defined as the percentage of a population without access to sufficient dietary energy needed for an active and healthy life.[4] South Africa's average undernourishment rate for the 2016 – 2018 period was calculated at 6%, an increase from an average of 4.4% that was reported for the 2002 – 2004 period. The relatively low rate of undernourishment in South Africa, compared to other countries in the region which have undernourishment rates above 20% (Botswana, Namibia and Eswatini), suggests that there is enough food to cater for the majority of the country's population. However, distribution and accessibility constraints, coupled with high rates of poverty and inequality, mean that a substantial proportion of the country's population is food insecure.

At the household level, one of the main indicators used to monitor food insecurity is reported hunger. Child hunger is emotive and subjective, and this is likely to undermine the reliability of estimates on the extent and frequency of reported hunger, but it is assumed that variation and reporting error will be reasonably consistent so that it is possible to monitor trends from year to year.

In 2018, 11% of children (2.1 million) lived in households that reported child hunger. More than a third of these children (36%) are from KwaZulu-Natal, while a fifth are from Gauteng. Child hunger rates in 2018 were 19 percentage points lower than they were in 2002 when 30% of children (5.5 million) lived in households that reported child hunger. The largest declines have been in the Eastern Cape, Limpopo and Mpumalanga. One of the main contributors to this decline is the expansion of the Child Support Grant which in 2018 covered over 12 million children.[5] Another is the National School Nutrition Programme, which by 2016/2017 reached over 9 million learners in approximately 20,000 schools[6, 7] (though only during term-time and excluding children who are too young to attend school).

Analysis of child hunger rates within provinces shows that child hunger rates are highest in the North West and KwaZulu-

Figure 4a: Children living in households with reported child hunger, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	48.0%	29.7%	17.1%	31.7%	27.9%	34.0%	29.7%	27.5%	17.1%	30.1%
	1,407,000	297,000	503,000	1,314,000	675,000	518,000	346,000	109,000	275,000	5,455,000
2018	5.4%	10.8%	7.8%	18.0%	3.4%	10.7%	18.8%	14.4%	10.0%	10.7%
	135,000	111,000	325,000	753,000	80,000	180,000	260,000	63,000	197,000	2,110,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

Natal provinces, affecting 19% and 18% of children living there respectively. The lowest hunger rates are in Limpopo and Eastern Cape provinces (3% and 5% respectively). Despite high poverty rates, Limpopo has always reported child hunger rates below the national average, perhaps because of its highly fertile and productive land in rural areas where most of the population lives. However, there is no clear explanation for the dramatic decline in reported hunger in the Eastern Cape. Over the period from 2002 – 2018, reported child hunger rates in that province fell from 48% (higher than any other province) to 5% (the second lowest). This is despite the fact that the Eastern Cape has the highest poverty rates in the country, with 48% of children living below the food poverty line.

There are no differences in reported child hunger across gender or age groups. However, there are significant differences across race; 12% of African children live in households that reported child hunger, compared to 7% of Coloured children and less than 1% of Indian and White children. Differences are even more pronounced across income quintiles. While 18% of children living in the poorest 20% of households experienced hunger, only one percent of children in quintile 5 (the richest 20%) lived in households that reported child hunger.

Children who suffer from hunger are at risk of various forms of malnutrition, including wasting, stunting, overweight and micronutrient deficiencies. It must be recognised that child hunger is a subjective indicator and does not capture other important aspects of food security such as dietary diversity and consumption of nutrient-dense foods, both of which are important for children's healthy growth especially in early childhood. Children may live in households that do not report hunger but may still not have access to sufficient nutritious food and are therefore at risk of malnutrition. In 2018, approximately 30% of children who lived in households that did not report child hunger were classified as living below the food poverty line, an indicator that their households lacked the financial resources needed to meet minimum dietary requirements for children and other household members.[8]

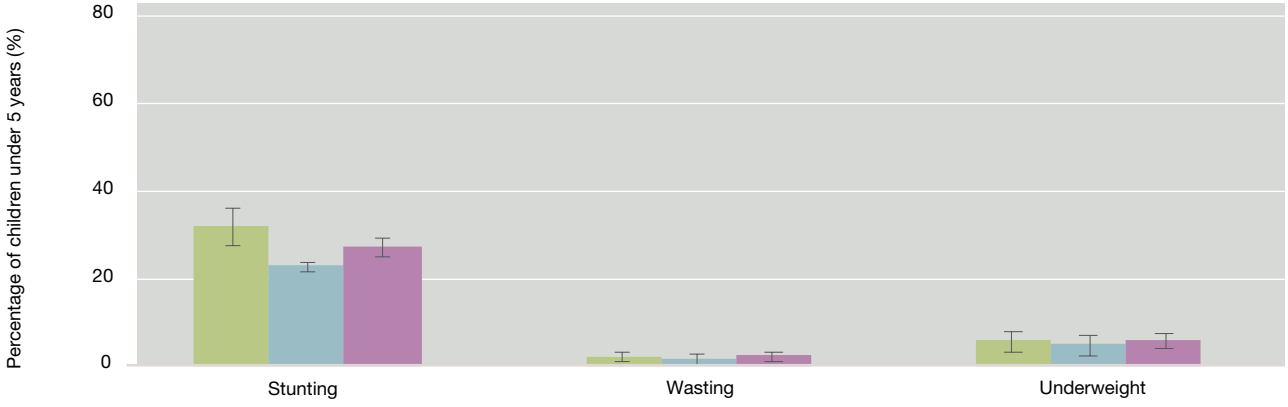
Undernutrition in children: stunting, wasting and underweight

Children who consume diets that are insufficient in energy and nutrients are at risk of undernutrition, which can manifest in the form of stunting, wasting, or underweight.

- **Stunting** occurs when a child's height-for-age is low compared to healthy children in the same reference population. Stunting is a chronic form of malnutrition that manifests over a relatively long period of time compared to other forms of malnutrition.
- **Wasting** is an acute form of malnutrition and is present when the child's weight-for-height is below the WHO reference point.
- **Underweight** is defined as low weight-for-age and occurs when child's weight-for-age is below the WHO reference point.

A child is classified as stunted, wasted or underweight if their height-for-age, weight-for-height, or weight-for-age scores respectively are more than two standard deviations below the globally accepted reference cut-off point as defined by the World Health Organization (WHO). Analysis of the 2016 South Africa Demographic and Health Survey (SADHS) shows that stunting is the most common manifestation of malnutrition in South Africa and affects 27% of children under five years old. Wasting and underweight rates for children under five are substantially lower, at 2.5% and 5.9% respectively. The prevalence of stunting is higher among young boys (30%), than girls (25%). Rural areas have significantly higher stunting rates (29%) than urban areas (26%). Provincial estimates show that stunting is highest in the

Figure 4b: Stunting, wasting and underweight, in children under five years, 2016



	Stunting	Wasting	Underweight
0 – 2 years	32.0%	2.3%	5.9%
3 – 4 years	22.9%	1.8%	5.1%
Under five	27.4%	2.5%	5.9%

Source: Department of Health, Statistics South Africa, South African Medical Research Council and ICF (2017) *South African Demographic & Health Survey 2016: Key Indicators.* Pretoria and Rockville, Maryland: DOH, Stats SA, SAMRC & ICF. Analysis by Winnie Sambu.

Free State and Gauteng (both at 34%), and lowest in Mpumalanga and Northern Cape provinces (both at 21%). However, it must be noted that the South African Demographic and Health Survey sample size is small and therefore the confidence intervals are wide when the data is disaggregated to lower levels, especially in provinces with small populations, like Northern Cape.

Maternal health is one of the most important predictors of child nutritional outcomes. Pregnant women who are undernourished are more likely to deliver babies with low birthweight who are in turn at risk of being stunted.[9, 10] Other maternal factors, such as education, can also affect a child's nutritional status in that mothers with higher education levels are more likely than those without to make informed decisions around feeding and may make more regular visits to health care facilities during and after pregnancy.[11] While 33% of children whose mothers do not have matric are stunted, the percentage among those whose mothers have at least a matric qualification is 17%.[12]

An important driver of stunting and other forms of malnutrition is the consumption of inadequate diets that are not sufficient in quantity and quality. In South Africa, only 23% of children aged 6 – 23 months were reported to have been fed a minimum acceptable diet that had minimum dietary diversity, meal frequency and appropriate milk feeds.[12]

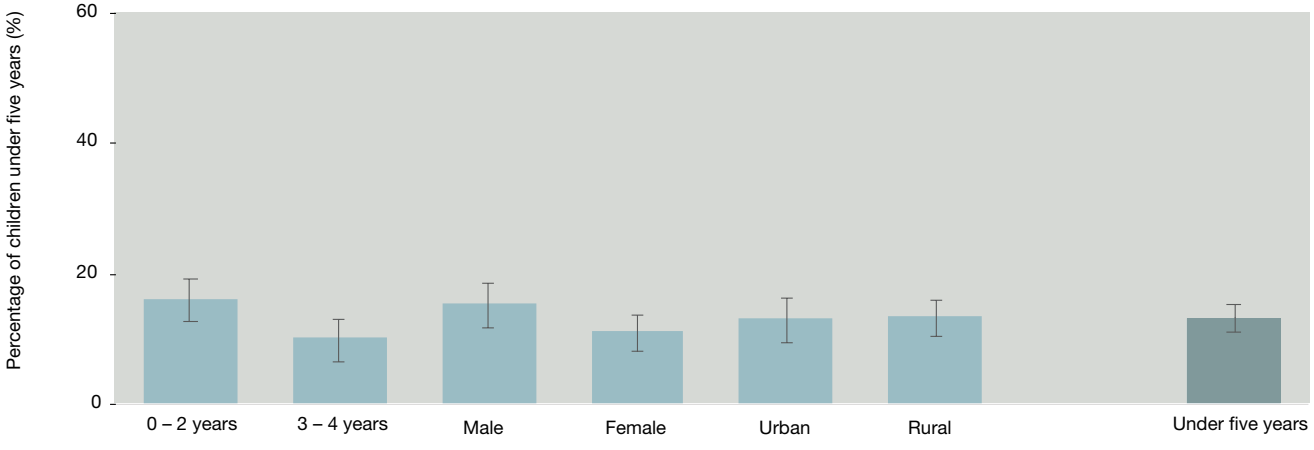
Poverty is the main underlying cause of undernutrition, leading to more direct causes of poor nutritional status. Hunger and low dietary diversity are more prevalent in poor households. Similarly, inadequate living conditions such as inadequate water and sanitation, are more common among poor households. These conditions can cause children to suffer from infections like diarrhoea and pneumonia, increasing the risk of them becoming wasted. If these infections occur frequently or become severe, they can result in more chronic forms of malnutrition.[9, 13] Under-five stunting rates are highest in the poorest wealth quintile (36%), and lowest in the richest quintile (13%).[12]

Undernutrition rates are higher among young children particularly those in the first 1,000 days of life. This is mainly because early childhood is a period of rapid growth and development and inadequate dietary intake can easily compromise this process. During this stage, children are also prone to illness due to poor feeding or exposure to poor living conditions in the home and environment. A third of children aged 0 – 2 years are stunted, compared to nearly a quarter for children aged 3 – 4 years.

Undernutrition increases the risk of infection in early childhood, which in turn compromises the child's health and increases healthcare costs for the child's household and government. Undernutrition is an underlying cause of mortality in children. An audit of hospital child deaths in South Africa found that 30% of infants (28 days – 1 year) and 42% of 1 – 5-year olds who died in 2012/13 were severely malnourished (suffering from Kwashiorkor, Marasmus, or Marasmic Kwashiorkor).[14] Of those who died from diarrhoeal causes, almost 40% were severely malnourished.[14]

Older children who are undernourished are more likely to be absent from school, and this compromises their learning. In addition, malnutrition is a risk factor for poor child development, with various studies showing associations between stunting and poor motor and cognitive development.[15-17] The effects of malnutrition also extend to adulthood, where productivity has been shown to be significantly affected.[18] It can be difficult for children who are stunted to recover, and for those who do, the negative effects experienced while stunted (such as poor cognitive development), may be irreversible.[11]

Figure 4c: Children under five years who are overweight or obese, 2016



	0 – 2 years	3 – 4 years	Male	Female	Urban	Rural	Under five years
2016	16.2%	10.2%	15.5%	11.1%	13.2%	13.5%	13.3%

Source: National Department of Health, Statistics South Africa, South African Medical Research Council and ICF (2017) *South Africa Demographic and Health Survey 2016: Key Indicators.* Pretoria and Rockville, Maryland: NDOH, Stats SA, SAMRC & ICF. Analysis by Winnie Sambu.

Overnutrition in children: overweight and obesity

Overnutrition occurs when there is an excessive intake of dietary energy. It manifests in two main forms: overweight and obesity. Children under five years old are defined as **overweight** when their weight-for-height is greater than two standard deviations above the WHO reference cut-off point. They are defined as **obese** when their weight-for-height is more than three standard deviations above the WHO Child Growth Standards. Among children older than five years, body mass index (BMI) is used to classify children into four categories: normal weight, thin, severely thin, overweight, and obese.

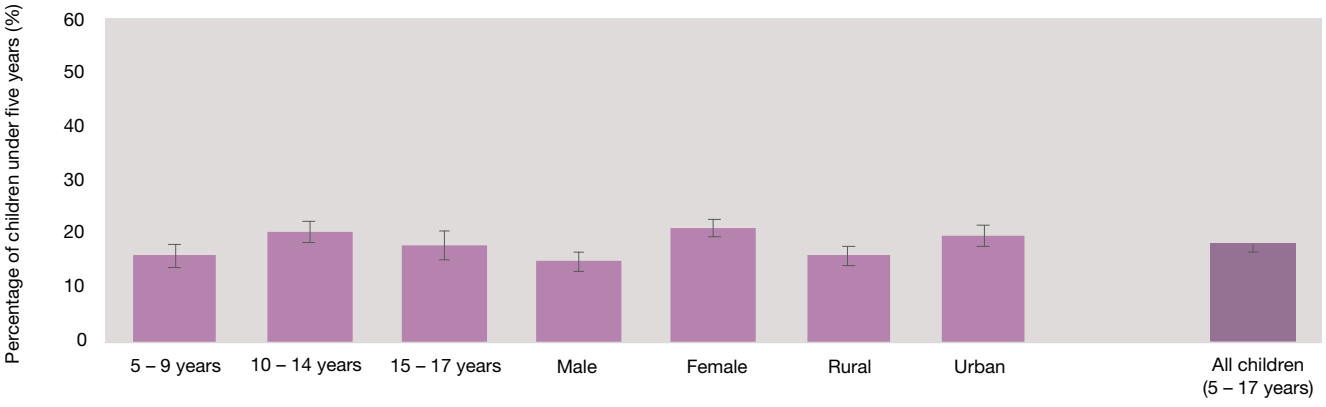
Overweight and obesity in early childhood increases the risk for adult obesity, as well as associated conditions like high cholesterol, diabetes and high blood pressure,[19, 20] All of these are conditions with rising prevalence in South Africa.

Consumption of high-calorie diets, including those that are rich in salt, sugar and fats, is a main cause of overweight and obesity among children and adults. This is in turn influenced by other factors such as household poverty coupled with the high cost of healthy foods. Another contributing factor is an increasingly sedentary lifestyle. Maternal feeding practices and cultural beliefs about ideal child weight have also been linked to overnutrition. In addition, the consumption of infant formula milk has been associated with childhood obesity because protein and energy intake are higher among infants who are formula-fed.[21, 22] Therefore, exclusive breastfeeding for the first six months of a baby's life is important as it protects against overweight and obesity in childhood, in addition to numerous other positive effects.[23]

Approximately 13% of South Africa's children under five years are overweight. Overnutrition rates are higher among young boys than girls (15% vs 11%). There are no significant differences in overnutrition rates across urban and rural areas. Compared to estimates from the 2008 National Income Dynamics Survey,[24] overweight rates have remained fairly stable at 13%.

Overweight and obesity rates are significantly higher among older children. Data from the most recent wave of NIDS (2017) show 16% of children aged 5 – 9 and 22% of those aged 10 – 14 are classified as overweight or obese. Overall, 18% of children aged 15 – 17 years were found to be overweight or obese. The rate was significantly higher for girls (22%) than boys (15%), and for children living in urban areas (20%) compared to rural areas (16%).

Figure 4d: Children over five years who are overweight or obese, 2017



	5 – 9 years	10 – 14 years	15 – 17 years	Male	Female	Rural	Urban	All children (5 – 17 years)
2017	16.3%	20.7%	18.3%	15.2%	21.5%	16.3%	20.1%	18.4%

Source: Southern Africa Labour and Development Research Unit (2018) National Income Dynamics Study 2017, Wave 5 [dataset]. Version 1.0.0 Cape Town: SALDRU [producer]. Cape Town: DataFirst [distributor]. Analysis by Winnie Sambu.

Micronutrient deficiencies

Early childhood is a period of rapid growth with a high demand for micronutrients (vitamins and minerals) such as zinc, iron and vitamin A. Inadequate nutrient intake causes micronutrient deficiency, which has negative effects for children given that micronutrients are crucial for healthy growth and development. For example, zinc plays an important role in brain functioning, and inadequate intake can cause poor cognitive development. Iron deficiency affects motor and cognitive development in children younger than 4 years.[13] Vitamin A deficiency causes illness, can cause visual impairment and increases the risk for mortality.[13]

In South Africa, the main forms of micronutrient deficiencies that affect children are vitamin A, iron and zinc deficiencies. However, because data on the prevalence of micronutrient deficiencies is not regularly collected at national and regional levels, it is difficult to monitor prevalence and trends. A national survey conducted in 2012, the South Africa Health and Nutrition Examination Survey (SANHANES), estimated vitamin A deficiency among children under five years at 44%, with the deficiency rates higher among boys (49%) than girls (39%).[25]

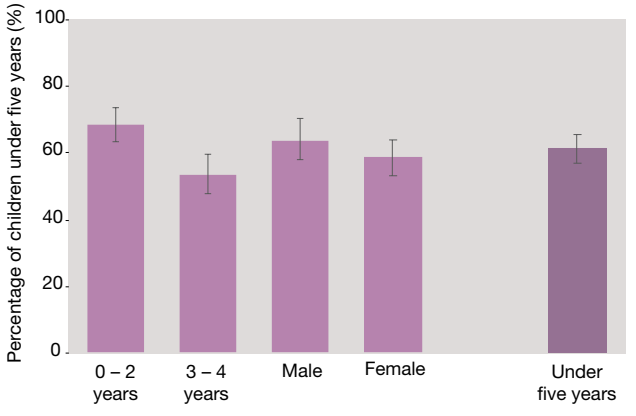
A global analysis of vitamin A deficiency in 138 low- and middle-income countries estimated that 1.7% of deaths among children under five years in 2013 could be attributed to vitamin A deficiency.[26] To prevent micronutrient deficiencies, South Africa introduced a national food fortification programme in 2003 which requires all maize and wheat products to be fortified with

vitamins and minerals. The government has also been running a national vitamin A supplementation programme since 2002, to combat vitamin A deficiency and reduce the mortality risk in young children.[27, 28] In 2017/2018, 54% of children aged 12 – 59 months received vitamin A supplementation.[29]

The prevalence of anaemia among young children is also high. The 2016 South African Demographic Health Survey classified 61% of children under five years as anaemic. A quarter (24%) suffer from mild anaemia while 35% are moderately anaemic and 2% are severely anaemic. Anaemia rates are higher among poor children; 35% of those in the poorest wealth quintile were moderately anaemic, compared to 18% in the top quintile. The anaemia estimates reported here are significantly higher than those reported in previous national surveys. There is no clear reason for this and so these estimates must be treated with caution.[12]

There are no recent national level estimates on zinc deficiency. The 2005 National Food Fortification Baseline Survey found that 44% of children aged 1 – 9 years had inadequate zinc status and were therefore at risk of zinc deficiency.[30] Some recent studies, although with small sample sizes, have found a high prevalence of zinc deficiency. One such study, involving 349 children from a rural area of Limpopo province, found that 43% of the children were found to be zinc deficient.[31]

Figure 4e: Anaemia, in children under five years, 2016



	0 – 2 years	3 – 4 years	Male	Female	Under five years
2016	68.4%	53.7%	63.9%	58.7%	61.3%

Source: National Department of Health, Statistics South Africa, South African Medical Research Council and ICF (2017) *South African Demographic & Health Survey 2016: Key Indicators*. Pretoria and Rockville, Maryland: NDOH, Stats SA, SAMRC & ICF. Analysis by Winnie Sambu.

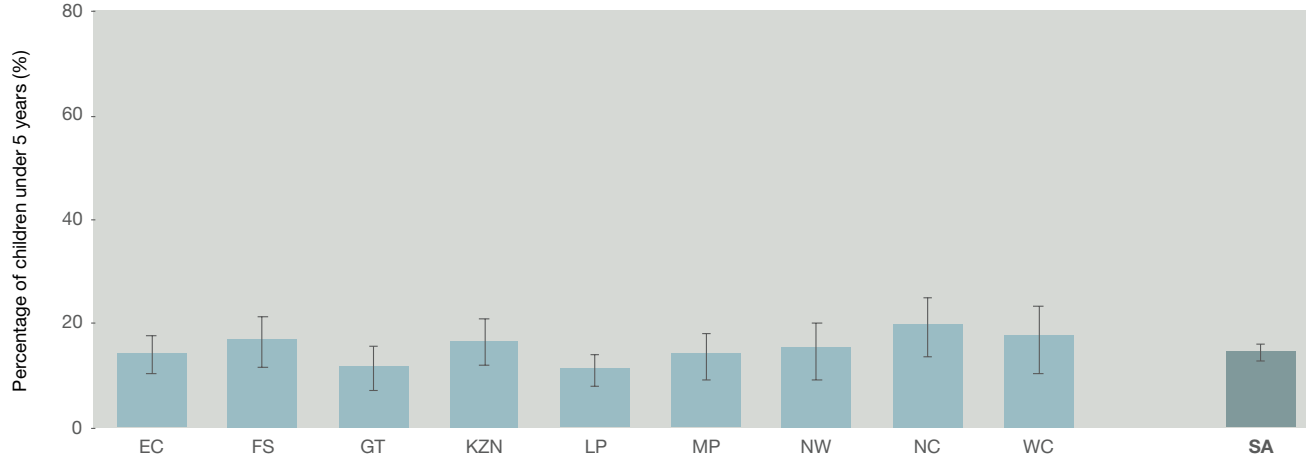
Low birth weight

The WHO defines low birth weight as less than 2500 grams. However, the term low birth weight encompasses a set of complex outcomes: pre-term neonates (babies born before 37 weeks of gestation), small for gestational age neonates at term (those born smaller in comparison with other neonates with similar number of weeks of pregnancy), and neonates who are both pre-term and are small for gestational age.[32]

Birth weight is an important predictor of child health and nutritional outcomes. During the neonatal and infancy period, low birth weight increases the risk for illness and death. Children who are born with low birth weight are also more likely to be stunted, compared to those who are not. Birth weight is also an important predictor of schooling outcomes,[33] and of long-term health in that low birth weight increases the risk for chronic illnesses (such as diabetes) and mortality in adulthood.[34]

There are many causes of low birth weight, ranging from foetal and placental factors during pregnancy, to maternal and environmental factors. Low birth weight is associated with preeclampsia, a medical condition which only occurs during pregnancy. Preeclampsia reduces placental function and affects

Figure 4f: Children under five years born with low birth weight, by province, 2016



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	SA
%	14,3%	17,0%	12,0%	16,9%	11,4%	15,6%	15,6%	19,8%	17,9%	14,5%

Source: National Department of Health (NDoH), Statistics South Africa (StatsSA), South African Medical Research Council (SAMRC), ICF. *South Africa Demographic and Health Survey 2016*. Pretoria, South Africa and Rockville, Maryland, USA; 2019. Analysis by Winnie Sambu.

the transfer of nutrients from a mother to her unborn baby, increasing the risk for preterm birth and/or small-for-gestational age delivery.[32, 35] Risk factors for preeclampsia include chronic hypertension, diabetes, obesity and adolescent pregnancy.[36] Poor maternal nutrition during pregnancy also increases the risk for low birth weight; an analysis of low-income countries found that 25% of low birth weight incidences were attributable to maternal anaemia during pregnancy.[37] Other maternal factors associated with low birth weight include smoking and alcohol consumption during pregnancy.[38, 39]

In South Africa, 14.5% of infants are born with low birth weight (regardless of gestational age). This estimate is similar to the global and eastern and southern Africa estimates (15% and 14% respectively), but significantly higher than the average estimate for Latin America and the Caribbean (9%).[40] Low birth weight rates in South Africa are slightly higher among females (16%), than males (14%). There are no significant differences in low birth weight rates across rural and urban areas, or across wealth quintiles. However, across provinces, low birth weight rates are highest in the Northern Cape (20%), Free State (17%), Western Cape (16%) and KwaZulu-Natal (16%). There is also a significant association between maternal age and low birth weight; 19% of children with low birth weight were born to mothers aged 35 – 49 years, compared to 14% born to under 20-year olds, 15% born to 20 – 24-year olds, and 12% of children born to 25 – 29-year-old women. The incidence of low birth weight has increased since 1998 when 8% of children under 5 years were reported to have been born weighing less than 2,500 grams.[41]

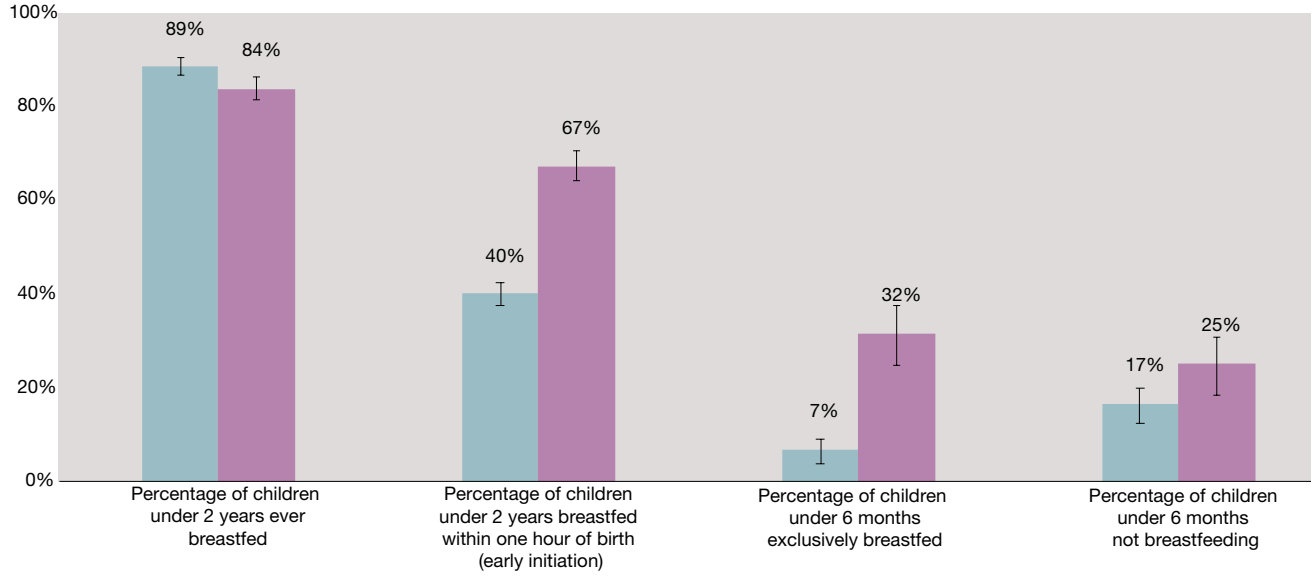
Adequate nutrition for pregnant women of reproductive age is important to ensure improved birth weight outcomes. Nutrient supplementation for those with micronutrient deficiencies (e.g. iron and folic acid) is important. Other measures include smoking cessation during and after pregnancy, and improving household living conditions to ensure access to adequate water and sanitation.[32] Health facilities should offer timely and effective care for pregnant women who present with symptoms of preeclampsia. For infants born with low birth weight, medical and nutritional care are important to ensure that infants gain weight and reduce the risk of illness and malnutrition.

Exclusive breastfeeding

This indicator shows the proportion of children who are exclusively breastfed for the first six months of life. The WHO recommends early initiation and exclusive breastfeeding for the first six months. Complementary feeding should commence from six months with the introduction of foods that are nutritionally adequate, safe and appropriate, coupled with ongoing breastfeeding which should continue for up to two years or more.[42]

Breast milk alone has all the nutrients needed for child growth and development during the first six months. Breastfeeding, and in particular exclusive breastfeeding, for the first six months, builds a child's immunity and protects against the risk of respiratory illnesses and gastrointestinal infections like diarrhoea.[43] Breastfeeding therefore improves the chances of a child's survival; one study estimated that 11.6% of all global child deaths in 2011 were attributable to sub-optimal breastfeeding.[13] Additionally, breastfeeding has been found to improve cognitive

Figure 4g: Breastfeeding among children under two years, 1998 & 2016



1998	89%	40%	7%	17%
2016	84%	67%	32%	25%

Source: Department of Health, Macro International. South Africa Demographic and Health Survey 1998 [Internet]. Pretoria, South Africa; 2002. Available from: http://dhsprogram.com/pubs/pdf/FR131/FR131.pdf;. National Department of Health (NDoH), Statistics South Africa (StatsSA), South African Medical Research Council (SAMRC), ICF. South Africa Demographic and Health Survey 2016. Pretoria, South Africa and Rockville, Maryland, USA; 2019. Analysis by Winnie Sambu.

development in young children, and has a protective effect against overweight/obesity (in both childhood and adulthood) and diabetes.[23] In addition, breastfeeding also allows a mother to bond with her baby and has health benefits for the mother, including quicker contraction of the uterus, post-pregnancy weight loss and reduced risk of non-communicable diseases like breast cancer and diabetes.[44]

There are several factors that may affect choices about exclusive breastfeeding. Poor infant feeding counselling can influence a pregnant woman's choice to breastfeed once the baby is born or can result in early cessation of breastfeeding. Some research conducted in South Africa has found that higher maternal education and socio-economic status are inversely related to exclusive breastfeeding,[45] and this may be due to a lack of maternity leave and breastfeeding support in the workplace, and wealthier women being more able to afford the cost of breast milk substitutes. The use of infant formula has historically been common among women with higher socio-economic status but usage has increased significantly among low-income mothers in part due to the excessive marketing of these products, as well as time constraints faced by mothers as they engage in income generating activities or return to work too soon after child birth because of a lack of paid maternity leave.[46, 47]

South Africa has introduced national regulations (Regulation 991) to remove commercial pressures from the infant feeding arena in line with the International Code of Marketing of Breastmilk Substitutes which prohibits advertising of substitutes to the general public, including through health professionals and the provision of free infant formula, and it has introduced other measures to promote and support breastfeeding.[48-50] However, the international code and Regulation 991 are not always adhered to.[51]

Despite clear policy recommendations that it is safe for HIV-positive mothers who adhere to antiretroviral therapy to exclusively breastfeed their infants for the first six months, HIV-positive women remain less likely to initiate breastfeeding after birth and exclusively breastfeed their infants[52] – partly due to fear of HIV transmission from mother to child and a lack of adequate counselling on infant feeding.[53]

In 2016, 32% of children aged 0 – 5 months were exclusively breastfed. This represents an improvement from the 7% and 8% exclusive breastfeeding rates reported in the 1998 and 2003 South African Demographic and Health Surveys, yet at the current rate of progress South Africa is not on track to reach the global target of 50% by 2025.[32] While 80% of mothers of children under two years initiated breastfeeding in the first day of life, exclusive breastfeeding rates decrease with age down to 23% of infants aged 4 – 5 months shaped in part by mothers' return to work and their misperception that breastmilk is not enough for a growing baby.[54]

A much higher proportion of children aged 0 – 5 months (75%) are breastfed at least sometimes (though with some complementary feeding). Thereafter, breastfeeding rates decline to 56% (6 – 12 months), 47% (12 – 17 months), and 18% (18 – 23 months). Overall, 84% of children under two years were breastfed at least sometimes in 2016, a decline from nearly 90% in 1998.

Breastfeeding rates were highest among children in the poorest quintile and lowest for those in the wealthiest quintile (58% vs 42% respectively). Early initiation of breastfeeding (within an hour of birth) is recommended by WHO. Two thirds of children under two years were breastfed within the first hour after birth in 2016, an improvement from the 40% recorded in 1998.

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Children's access to education

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Section 29(1)(a) of the South African Constitution states that "everyone has the right to a basic education", and section 29(1)(b) says that "everyone has the right to further education", and that the state must make such education "progressively available and accessible".[1]

Article 11(3)(a) of the African Charter on the Rights and Welfare of the Child says "States Parties to the present Charter shall take all appropriate measures with a view to achieving the full realization of this right and shall in particular … provide free and compulsory basic education".[2]

Article 28 of the UN Convention on the Rights of the Child recognises "the right of the child to education" and also obliges the state to "make primary education compulsory and available free to all".[3]

Children attending an educational institution

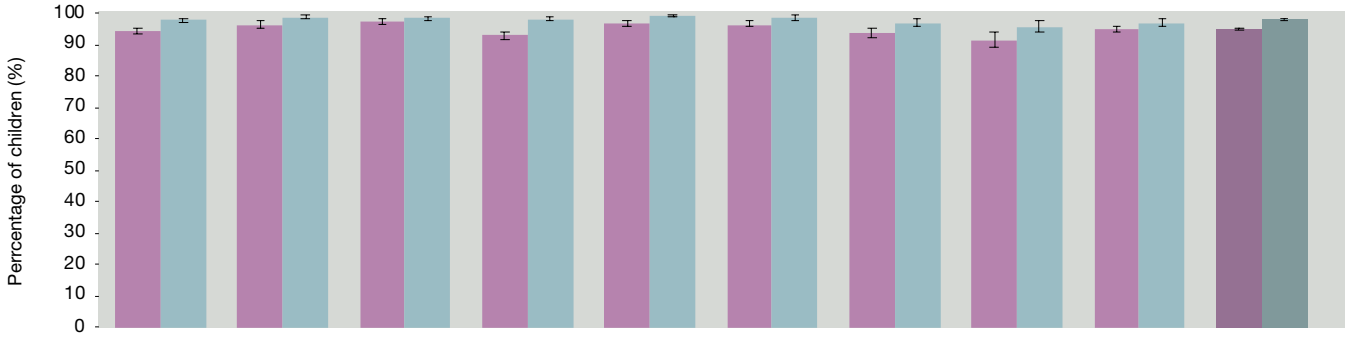
This indicator shows the number and percentage of children aged 7 – 17 who are reported to be attending a school or educational facility. It is different from "enrolment rate", which reflects the number of children enrolled in educational institutions, as reported by schools to the national Department of Basic Education (DBE) early in the school year.

Education is a central socio-economic right that provides the foundation for lifelong learning and economic opportunities. Children have a right to basic education and are admitted into grade 1 in the year they turn seven. Basic education is compulsory in grades 1 – 9, or for children aged 7 – 15. Children who have completed basic education also have a right to further education (grades 10 – 12), which the government must take reasonable measures to make available.

South Africa has high levels of school enrolment and attendance. Amongst children of school-going age (7 – 17 years), the vast majority (98%, or 11.3 million children) attended some form of educational facility in 2018. This is a small but significant increase from 2002, when the reported attendance rate was 95%. The overall increase is mainly due to a small but real growth in reported attendance rates for African and Coloured children over the 17-year period. In 2018, for the first time since this indicator was tracked, there are no significant differences in attendance rates across race groups. Of a total of 11.6 million children aged 7 – 17 years, 232,000 were reported as not attending school in 2018. At a provincial level, the Northern Cape and KwaZulu-Natal have seen the most significant increases in attendance rates between 2002 and 2018. In the Northern Cape, attendance increased from 91% to 95% while in KwaZulu-Natal attendance increased from 93% to 98%.

Overall attendance rates tend to mask drop-out among older children. Analysis of attendance among discrete age groups shows a significant drop in attendance amongst children older than 15. This also coincides with the end of compulsory schooling. Whereas around 99% of children in each age year from seven to 14 are reported to be attending an educational institution, the attendance rate drops to 98% for 15-year-olds, 96% for 16-year-olds, 92% for 17-year-olds, and 83% of 18-year-

Figure 5a: School-age children (7 – 17-year-olds) attending an educational institution, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	94.2%	96.3%	97.4%	92.9%	96.6%	96.4%	93.6%	91.2%	94.8%	95.0%
	1,811,000	603,000	1,763,000	2,470,000	1,525,000	917,000	671,000	221,000	944,000	10,926,000
2018	97.8%	98.6%	98.3%	98.0%	99.0%	98.5%	97.0%	95.4%	96.8%	98.0%
	1,456,000	615,000	2,378,000	2,482,000	1,331,000	948,000	779,000	249,000	1,094,000	11,332,000

Source: Statistics South Africa (2003, 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

olds are reported to be attending school (based on those who have not completed grade 12). Differences in reported school attendance rates between boys and girls are not statistically significant.

Amongst children of school-going age who are not attending school the main set of reasons for non-attendance relate to the quality of education or the learners ability to progress: "Education is useless or not interesting" is the reason given for 10% of those not attending school. Another 9% are "unable to perform at school" while 5% dropped out because they failed the exams. These signals of failures in the education system account for a quarter of all reported non-attendance. A further 7% of children not attending school are excluded because they were not accepted for enrolment.

The second main barrier to education is financial constraints. These include the cost of schooling (the reason given for 13% of children not attending schools) – which would also include related costs such as uniform and transport – and the opportunity costs of education where children have family commitments such as child minding (4%) or are needed to work in a family business or elsewhere to support household income (2%).

Disability is also an important reason, accounting for 15% of non-attendance, while illness accounts for an additional 5% of the non-attendance rate.

The main reasons for non-attendance can therefore be divided into three main categories: system failures (including exclusions and quality problems); financial barriers; and illness or disability. Together, these account for over 70% of non-attendance.

Pregnancy accounts for around 7% of drop-out amongst teenage girls not attending school, and only 3% of all non-attendance.[4-6]

Although the costs of education are cited as a barrier to attendance, the overall attendance rate for children in the lower income quintiles is not significantly lower than those in the wealthier quintiles.

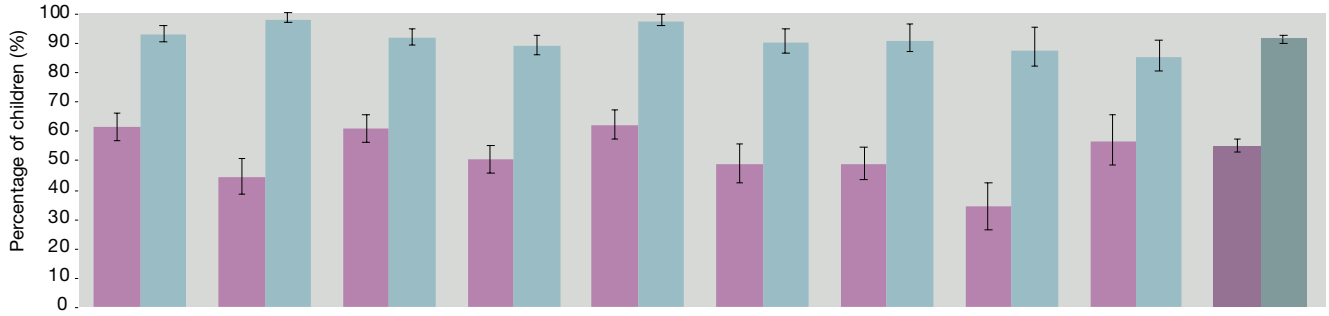
Attendance rates alone do not capture the regularity of children's school attendance or their progress through school. Research has shown that children from more disadvantaged backgrounds – with limited economic resources, lower levels of parental education, or who have lost their mother – are more prone to dropping out or progressing more slowly than their more advantaged peers. Racial inequalities in school advancement remain strong.[7-9] Similarly, school attendance rates tell us nothing about the quality of teaching and learning.[10] Inequalities in learning outcomes are explored through standardised tests such as those used in the international SAQMEC,[11] TIMMS and PIRLS[12] studies. The DBE's Annual National Assessments[13] have been discontinued.

Access to early childhood learning programmes

This indicator shows the number and percentage of children aged 5 – 6 who are reported to be attending an early childhood development (ECD) programme or educational institution – in other words, those attending out-of-home group care and learning centres including ECD centres, pre-grade R, grade R or grade 1 in ordinary schools. While all these facilities provide care and stimulation for early learning for young children, the emphasis on providing learning opportunities through structured learning programmes differs by facility type.

Educational inequalities are strongly associated with structural socio-economic (and therefore also racial) inequalities in South Africa.[9, 14] These inequalities are evident from the early years, even before entry into primary school.[15] They are exacerbated by an unequal schooling system,[16, 17] and are difficult to reverse. But

Figure 5b: Children aged 5 – 6 years attending school or ECD facility, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	61.4%	44.7%	61.0%	50.8%	62.2%	49.1%	49.1%	34.7%	56.9%	55.2%
	194,000	49,000	188,000	220,000	158,000	80,000	63,000	16,000	97,000	1,064,000
2018	93.1%	98.2%	92.1%	89.2%	97.7%	90.2%	91.1%	87.6%	85.2%	91.6%
	286,000	120,000	417,000	440,000	273,000	188,000	144,000	45,000	210,000	2,123,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: StatsSA.
Analysis by Katharine Hall and Winnie Sambu, Children's Institute, UCT.

Note: Prior to 2009, enrolment in crèches, playgroups and ECD centres would have been under-reported as the survey only asked about attendance at "educational institutions". More specific questions about ECD facilities were introduced in the 2009 survey and are likely to have resulted in higher response rates. (For a more detailed technical explanation, see www.childrencount.uct.ac.za).

early inequalities can be reduced through pre-school exposure to developmentally appropriate activities and programmes that stimulate cognitive development.[18, 19] Provided that they are of good quality, early learning programmes are an important mechanism to interrupt the cycle of inequality by reducing socio-economic differences in learning potential between children before they enter the foundation phase of schooling.

The Five-year Strategic Plan[20] of the DBE includes a broad goal to improve the quality of ECD provisioning and specifically to improve access to grade R through the supply of learning materials and improving the quality of grade R educators. Evidence suggests that quality group learning programmes are beneficial for cognitive development from about three years of age21 and the National Development Plan (NDP) priorities, cited in the DBE's strategic plan, include universal access to two years of early childhood development programmes.The DBE funds and monitors thousands of community-based grade R centres in addition to the school-based grade R classes. The NDP proposes the introduction of a second year of pre-school education, and that both years be made universally accessible to children.[22] It therefore makes sense to monitor enrolment in early learning programmes of children in the 5 – 6-year pre-school age group.

In 2015, there were 288,212 learners attending 4,058 ECD centres in South Africa, according to the DBE's administrative data.[23] Preliminary results from DBE, based on data from the Learner Unit Record Information and Tracking System (LURITS) and other provincial data sources show that, in addition to children in ECD centres, 824,000 learners were attending grade R or pre-grade R at ordinary primary schools in 2018, of whom 94% were at public (government schools) while 6%, or 46,000 learners, were at independent schools.[24]

In 2018, 92% of children (2.1 million) in the pre-school age group (5 – 6-year-olds) were reported to be attending some kind of educational institution, mostly in grade R or grade 1. This was double the 2002 level, when slightly fewer than 1.1 million children in the same age group were reported to be attending an educational institution. Nearly 200,000 children in this age group are not attending any kind of educational facility.

Attendance rates are high across all provinces. The highest attendance rates in 2018 were in the Free State and Limpopo (both at 98%), the Eastern Cape (93%) and Gauteng (92%). The lowest rates were in the Western Cape (85%) and Northern Cape (88%). This pattern differs from many other indicators, where the Western Cape often out-performs poorer and more rural provinces like the Eastern Cape and Limpopo. Similar patterns were found in analyses of the 2007 Community Survey and the 2008 National Income Dynamics Study.[25]

Given the inequities in South Africa, it is pleasing to see that there are no substantial racial differences in access to educational institutions by African and White children of pre-school age, although levels of attendance among Coloured children remain below the national average, at 83%. It is also encouraging that, as with formal school attendance, there are no strong differences in pre-school enrolment across the income quintiles. There are also no significant gender differences in access to pre-school.

As with the indicator that monitors school attendance, it should be remembered that this indicator tells us nothing about the quality of care and education that young children receive at educational facilities or the resources available at those facilities. High rates of attendance provide a unique opportunity because almost all children in an age cohort can be reached at a particularly important developmental stage; but this is a lost opportunity if the service is of poor quality.

Youth not in employment, education or training (NEETs)

"NEETs" is a term used to describe young people who are not in employment, education or training. The definition used here includes youth aged 15 – 24 who are not attending any educational institution and who are not employed or self-employed.[26]

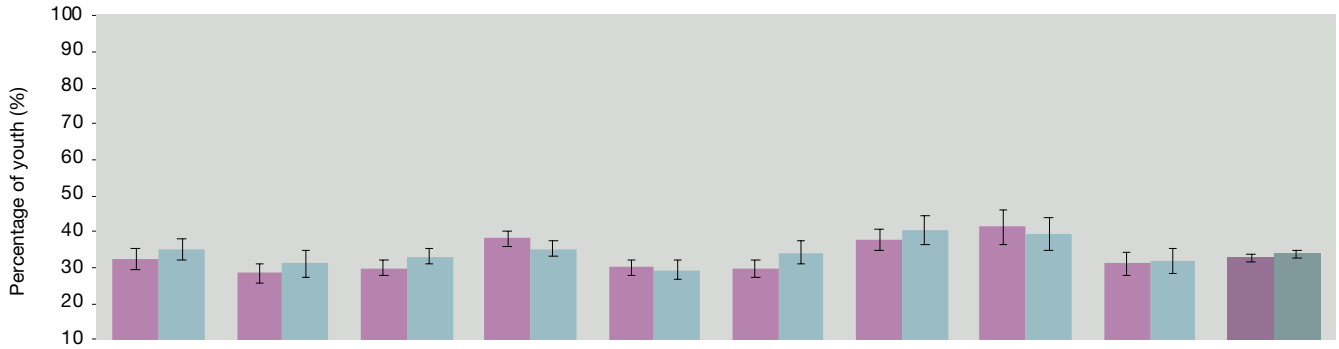
Widespread concerns about the large numbers of youth in this situation centre on two main issues: the perpetuation of poverty and inequality, including intergenerational poverty; and the possible implications of a large "idle" youth population for risk behaviour, social cohesion and the safety of communities.

Little is known about what NEETs actually do with their time. Young people who are neither learning nor engaged in income-generating activities may neverthless be "productive" within their households, for example by helping to maintain the home or looking after children and others in need of care. However, in the absence of income, NEETs remain dependent on the earnings of other household members, and on grants that are directed to children and the elderly. The Old Age Pension in particular has been found to support job-seeking activities for young people[27] and it has been argued that this unenvisaged expenditure of the grant could be addressed by extending social security to unemployed youth.[28]

The large number of NEETs in South Africa is linked to underlying problems in the education system and the labour market. Young people in South Africa have very high participation rates in education, including at secondary level. Enrolment rates for grades 11 and 12 have increased in recent years .and more young people attain grade 12 (and at an earlier age).[29] But there is still a sharp drop-off in enrolment numbers after grade 10 and only about half of young people in their early twenties have successfully completed grade 12.[29, 30] This reduces prospects for further study or employment.[31] Low quality and incomplete education represent what are termed the "supply-side" drivers of youth unemployment, where young people do not have the appropriate skills or work-related capabilities to be employable or to set up successful enterprises of their own, and so struggle to make the transition from education to work.[32, 33] The "demand-side" driver relates to a shortage of jobs or self-employment opportunities for those who are available to work.

In 2018 there were 9.5 million young people aged 15 – 24 in South Africa. Of these, 34% (3.2 million) were neither working nor enrolled in any education institution such as a school, university or college. The number of young people nationally who are not in education, training or employment has remained remarkably consistent over the last decade, but has increased over the two decades since 1996 when only two million NEETs were recorded.[34] South Africa has made no progress towards

Figure 5c: Youth (15 – 24 years) not in employment, education or training (NEETs), by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	32.4%	28.5%	30.0%	38.1%	30.1%	29.7%	37.6%	41.3%	31.1%	32.8%
	436,000	150,000	568,000	783,000	338,000	213,000	229,000	76,000	294,000	3,086,000
2018	35.0%	31.3%	33.2%	35.2%	29.4%	34.3%	40.4%	39.4%	32.0%	33.9%
	371,000	149,000	751,000	702,000	309,000	263,000	263,000	82,000	340,000	3,230,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018*. Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

what is now an explicit target of the Sustainable Development Goals, namely to substantially reduce the proportion of youth not in employment, education or training by 2020.[35] If anything, the number of NEETs has increased marginally.

The NEET rates are fairly even across the provinces. This is hard to interpret without further analysis. Limpopo, for example, is a very poor and largely rural province. It is possible that the slightly lower-than-average percentage of NEETs in that province is partly the result of many young people migrating to cities in search of work and they are therefore counted among the NEETs in more urban provinces. It is possible that young people who are not employed in the labour market may nevertheless be employed in small-scale agriculture if their household has access to land, and this could also help to smooth the provincial inequalities that are characteristic of many other indicators.

There is enormous variation within the broad youth group of 15 – 24 years. Only 5% of children aged 15 – 17 are classified as NEET because the majority are attending school. Within the 18 – 20 age band, 34% are NEETs, and more than half (53%) of those in the 21 – 24 age band are neither working nor in education or training.

While education attendance rates are fairly even for males and females, the gender disparity among NEETs is more pronounced. Thirty-seven percent of young women are not in employment, education or training – compared with 31% of young men.

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Children's access to housing

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Section 26 of the Constitution of South Africa provides that "everyone has the right to have access to adequate housing", and section 28(1)(c) gives children "the right to … shelter".[1]

Article 27 of the UN Convention on the Rights of the Child states that "every child has the right to a standard of living adequate for his/her development" and obliges the state "in cases of need" to "provide material assistance and support programmes, particularly with regard to … housing".[2]

Children living in urban and rural areas

This indicator describes the number and share of children living in urban and rural areas in South Africa.

Location is one of the seven elements of adequate housing identified by the UN Committee on Economic, Social and Cultural Rights.[3] Residential areas should ideally be situated close to work opportunities, clinics, police stations, schools and child-care facilities. In a country with a large rural population, this means that services and facilities need to be well distributed, even in areas that are not densely populated. In South Africa, service provision and resources in rural areas lag far behind urban areas.

Nearly half of South Africa's children (43%) lived in rural households in 2018 – equivalent to 8.5 million children. Looking back over a decade, there is a clear shift in the distribution of children towards urban areas: in 2002, 48% of children were found in urban households, and this increased to 57% by 2018. Yet children are consistently less urbanised than adults: In 2018, 69% of the adult population was urban, compared with 57% of children.

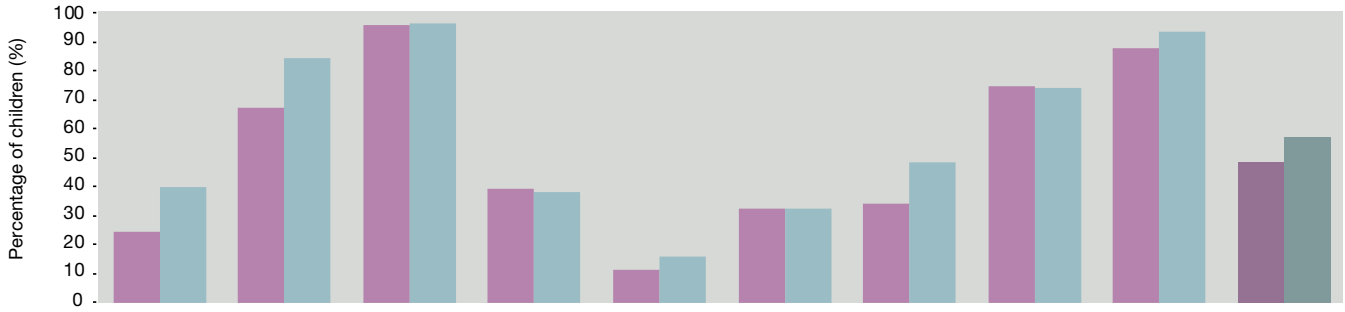
There are marked provincial differences related to the distribution of cities in South Africa, and the legacy of apartheid's spatial arrangements where women, children and older people in particular were relegated to the former homelands. The Eastern Cape, KwaZulu-Natal and Limpopo provinces alone are home to about three-quarters (72%) of all rural children in South Africa. KwaZulu-Natal has the largest child population in numeric terms, with 2.6 million (62%) of its child population being classified as rural. The least urbanised province is Limpopo, where only 16% of children live in urban areas. Proportionately more children (39%) live in the former homelands, compared with adults (27%). More than 99% of children living in the former homeland areas are African.

In 2018, children living in the Gauteng and Western Cape were almost entirely urban based (97% and 94% respectively). These provinces historically have large urban populations. The urban child population in Gauteng alone has grown by over 1.2 million since 2002 and the urban child population in the Western Cape has grown by 435,000. These increases would be partly the result of urban births, but also partly the result of within-province movement and migration from other provinces. There has also been a marked growth in the urban share of the child population are the Eastern Cape, Free State and North West.

Rural areas, and particularly the former homelands, have much poorer populations. Nearly two-thirds of children in the poorest income quintile live in rural areas compared with 10% in the richest quintile. In other words, it is mainly poor rural households that care for children – even though many of these children may have parents who live and work in urban areas. The inequalities remain strongly racialised. More than 90% of White, Coloured and Indian children are urban, compared with 51% of African children.

There are no statistically significant differences across age groups.

Figure 6a: Children living in urban areas, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	24.6%	67.2%	96.1%	39.5%	11.1%	32.5%	34.3%	74.8%	87.7%	48.2%
	721,000	672,000	2,825,000	1,641,000	270,000	494,000	399,000	298,000	1,411,000	8,730,000
2018	40.0%	84.5%	96.5%	38.2%	15.8%	32.2%	48.3%	74.4%	93.7%	57.0%
	1,005,000	863,000	4,039,000	1,598,000	374,000	538,000	667,000	324,000	1,848,000	11,256,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

Children living in formal, informal and traditional housing

This indicator shows the number and share of children living in formal, informal and traditional housing. For the purposes of the indicator, "Formal" housing is considered a proxy for adequate housing and consists of: dwellings or brick structures on separate stands; flats or apartments; town/cluster/semi-detached houses; units in retirement villages; rooms or flatlets on larger properties provided they are built with sturdy materials. "Informal" housing consists of: informal dwellings or shacks in backyards or informal settlements; dwellings or houses/flats/rooms in backyards built of iron, wood or other non-durable materials; and caravans or tents. "Traditional" housing is defined as a "traditional dwelling/hut/structure made of traditional materials" situated in a rural area.

Children's right to adequate housing means that they should not have to live in informal dwellings. One of the seven elements of adequate housing identified by the UN Committee on Economic, Social and Cultural Rights is that it must be "habitable".[3] To be habitable, houses should have enough space to prevent overcrowding, and should be built in a way that ensures physical safety and protection from the weather.

Formal brick houses could be considered "habitable housing", whereas informal dwellings such as shacks in informal settlements and backyards would not be considered habitable or adequate. Informal housing in backyards and informal settlements make up the bulk of the housing backlog in South Africa. "Traditional" housing in rural areas cannot necessarily be assumed to be inadequate. Some traditional dwellings are more habitable than new subsidy houses – they can be more spacious and better insulated, for example. Access to services is another element of "adequate housing". Children living in formal areas are more likely to have services on site than those in informal or traditional dwellings. They are also more likely to live closer to schools, libraries, clinics and hospitals than those living in informal settlements or rural areas. Children living in informal settlements are more exposed to hazards such as shack fires and paraffin poisoning with very young children especially at risk. The distribution of children in informal dwellings is slightly skewed towards younger children and babies: 42% of children in informal housing are in the 0 – 5-year age group.

In 2018, nearly 1.7 million children (9%) lived in backyard dwellings or shacks. The number of children in informal housing has declined slightly from 2.3 million (13%) in 2002. The provinces with the highest shares of informally-housed children are the Western Cape (with 17% of children in that province informally housed), Gauteng (14%), North West and Free State (each with 13% of children living in informal housing). The Eastern Cape and KwaZulu-Natal have by far the largest shares of children living in traditional dwellings (30% and 19% respectively).

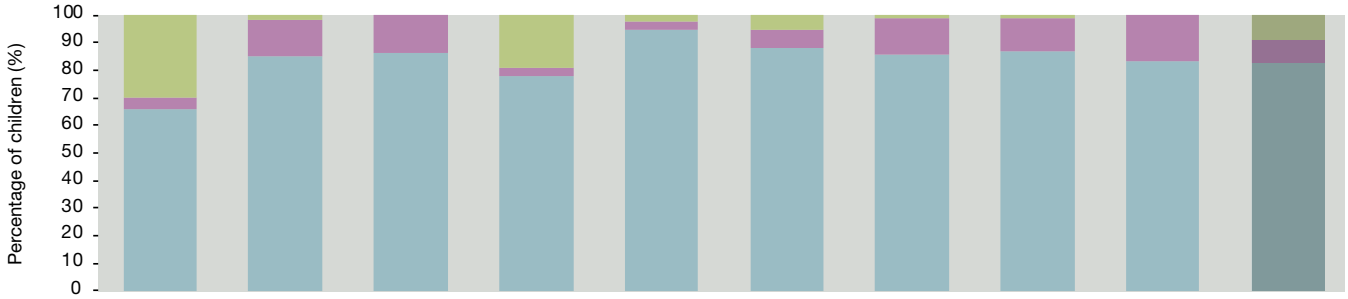
The distribution of children in formal, informal and traditional housing has remained fairly constant since 2002. But racial inequalities persist. Almost all White children (99%) live in formal housing, compared with only 81% of African children. Access to formal housing increases with income. Ninety-five percent of children in the wealthiest 20% of households live in formal dwellings, compared with 77% of children in the poorest quintile.

Children living in overcrowded households

Children are defined as living in overcrowded dwellings when there is a ratio of more than two people per room (excluding bathrooms but including kitchen and living room). Thus, a dwelling with two bedrooms, a kitchen and sitting-room would be counted as overcrowded if there were more than eight household members.

The UN Committee on Economic, Social and Cultural Rights defines "habitability" as one of the criteria for adequate

Figure 6b: Children living in formal, informal and traditional housing, by province, 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
Formal	66.2%	85.2%	86.1%	78.1%	94.6%	88.0%	85.8%	86.8%	83.1%	82.7%
	1,663,000	871,000	3,603,000	3,268,000	2,246,000	1,473,000	1,186,000	378,000	1,638,000	16,327,000
Informal	4.1%	13.0%	13.8%	2.7%	3.3%	6.8%	13.3%	12.1%	16.9%	8.5%
	103,000	133,000	578,000	114,000	77,000	114,000	184,000	53,000	333,000	1,684,000
Traditional	29.7%	1.8%	0.1%	19.2%	2.2%	5.2%	0.9%	1.1%	0.0%	8.8%
	747,000	18,000	5,000	802,000	51,000	86,000	13,000	5,000	0	1,730,000

Source: Statistics South Africa (2019) *General Household Survey 2018*. Pretoria: Stats SA.
Analysis by Katharine Hall, Children's Institute, UCT.

housing.[3] Overcrowding is a problem because it can undermine children's needs and rights. For instance, it is difficult for school children to do homework if other household members want to sleep or watch television. Children's right to privacy can be infringed if they do not have space to wash or change in private. The right to health can be infringed as communicable diseases spread more easily in overcrowded conditions Overcrowding also places children at greater risk of sexual abuse, especially where boys and girls have to share beds, or children have to share beds with adults.

Overcrowding makes it difficult to target services and programmes to households effectively – for instance, urban households are entitled to six kilolitres of free water, but this household-level allocation discriminates against overcrowded households because it does not take account of household size.

In 2018, 3.5 million children lived in overcrowded households. This represents 18% of the child population – much higher than the share of adults living in crowded conditions (10%).

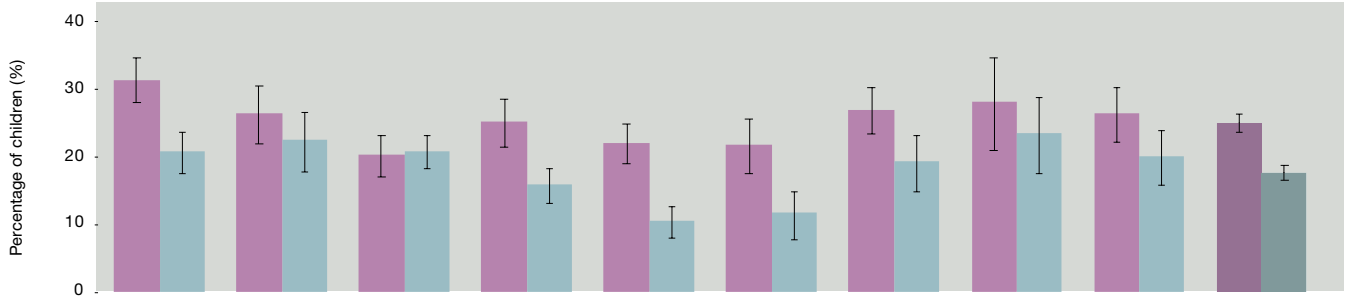
Overcrowding is associated with housing type: 57% of children who stay in informal dwellings also live in overcrowded conditions, compared with 27% of children in traditional dwellings and 13% of children in formal housing.

Young children are significantly more likely than older children to live in overcrowded conditions. Twenty-one percent of children below six years live in crowded households, compared to 17% of children aged 6 – 11, and 15% of children over 12 years.

There is a strong racial bias in children's housing conditions. While 19% of African and 21% of Coloured children live in crowded conditions, less than 1% of Indian and White children live in overcrowded households. Children in the poorest 20% of households are more likely to be living in overcrowded conditions (22%) than children in the richest 20% of households (5%).

The average household size has gradually decreased from 4.5 in 1996 to around 3.4 in 2018, indicating a trend towards smaller households. This is related to the rapid growth in single-person households where adults live alone: there are nearly 17 million households in South Africa, of which 22% (around 3.7 million) are households where one person lives alone.[4] The reduction in average household size has also been linked to the provision of small subsidy houses and the splitting of households into smaller units.[5, 6] Households in which children live are larger than the national average, although they have also declined in size over time. The mean household size for adult-only households is 1.7, while the mean household size for households with children is 4.9.[7]

Figure 6c: Children living in overcrowded households, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	31.5%	26.5%	20.4%	25.2%	22.1%	21.9%	26.9%	28.3%	26.5%	25.1%
	922,000	264,000	599,000	1,046,000	534,000	333,000	314,000	113,000	427,000	4,551,000
2018	20.8%	22.6%	20.9%	15.9%	10.6%	11.7%	19.4%	23.7%	20.1%	17.8%
	522,000	230,000	873,000	665,000	252,000	196,000	268,000	103,000	397,000	3,507,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018.* Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

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Children's access to services

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Section 27(1)(b) of the Constitution of South Africa provides that "everyone has the right to have access to … sufficient … water" and section 24(a) states that "everyone has the right to an environment that is not harmful to their health or well-being".[1]

Article 14(2)(c) of the African Charter on the Rights and Welfare of the Child obliges the state to "ensure the provision of … safe drinking water".[2]

Article 24(1)(c) of the UN Convention on the Rights of the Child says that states parties should "recognise the right of the child to the enjoyment of the highest attainable standard of health" and to this end should "take appropriate measures to combat disease and malnutrition …, including the provision of clean drinking-water".[3]

Children's access to basic water

This indicator shows the number and percentage of children who have access to piped drinking water at home – either inside the dwelling or on site. This is used as a proxy for access to adequate water. All other water sources, including public taps, water tankers, dams and rivers, are considered inadequate because of their distance from the dwelling or the possibility that the water is of poor quality. The indicator does not show whether the water supply is reliable or if households have broken facilities or are unable to pay for services.

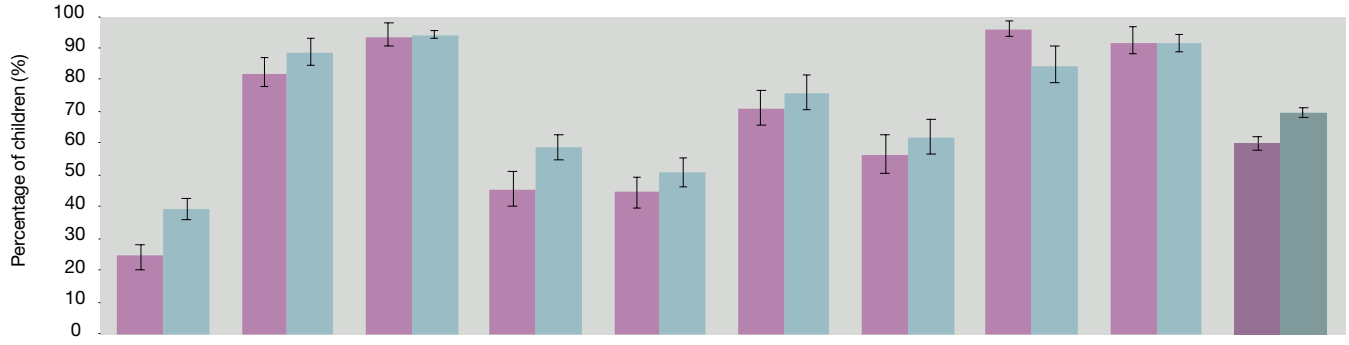
Clean water is essential for human survival. The World Health Organisation defined "reasonable access" to water as being a minimum of 20 litres per person per day.[4] The 20-litre minimum is linked to the estimated average consumption when people rely on communal facilities and need to carry their own water for drinking, cooking and the most basic personal hygiene. It does not allow for bathing, showering, washing clothes or any domestic cleaning.[5] The water needs to be supplied close to home, as households that travel long distances to collect water often struggle to meet their basic daily quota. This can compromise children's health and hygiene.

More recently, the Sustainable Development Goals (target 6.1) call for universal and equitable access to safe and affordable drinking water, and this is defined as a safely managed drinking water service from an improved water source that is located on premises.

Young children are particularly vulnerable to diseases associated with poor water quality. Gastro-intestinal infections with associated diarrhoea and dehydration are a significant contributor to the high child mortality rate in South Africa,[6] and intermittent outbreaks of cholera in some provinces pose a serious threat to children. Lack of access to adequate water is closely related to poor sanitation and hygiene. In addition, children may be responsible for fetching and carrying water to their homes from communal taps, or rivers and streams. Carrying water is a physical burden that can lead to back problems or injury from falls. It can also reduce time spent on education and other activities and can place children at personal risk.[7] This child-centred indicator of adequate water is therefore limited to a safe water source on site.

There has been little improvement in children's access to water over the past 15 years. Close to six million children live

Figure 7a: Children living in households with water on site, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	24.4%	81.7%	93.5%	45.5%	44.5%	70.8%	56.5%	95.6%	91.7%	59.8%
	716,000	817,000	2,747,000	1,888,000	1,077,000	1,077,000	658,000	380,000	1,476,000	10,836,000
2018	39.2%	88.2%	94.2%	58.9%	50.7%	75.5%	61.9%	84.1%	91.3%	69.8%
	987,000	901,000	3,944,000	2,462,000	1,204,000	1,262,000	855,000	367,000	1,800,000	13,782,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018*. Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

in households that do not have access to clean drinking water on site. In 2018, more than three-quarters (78%) of adults lived in households with drinking water on site – compared with only 70% of children.

Provincial differences are striking. More than 90% of children in the Gauteng and the Western Cape provinces have an adequate water connection. However, access to water remains poor in KwaZulu-Natal (59%), Limpopo (51%) and the Eastern Cape (39%). The Eastern Cape appears to have experienced a striking improvement in water provisioning since 2002 (when only 24% of children had water on site). KwaZulu-Natal has also recorded significant improvements.The significant decline in access to water in the Northern Cape may represent a deterioration in water access, or may be the result of weighting a very small child population.

Children living in formal areas are more likely to have services on site than those living in informal settlements or in the rural former homelands. While the majority (77%) of children in formal dwellings have access, it decreases to 55% for children living in informal dwellings. Only 19% of children living in traditional housing have water available on the property.

The vast majority of children living in traditional dwellings are African, so there is also a pronounced racial inequality in access to water. In 2018, 65% of African children had water on site, while more than 95% of all other population groups had drinking water at home.There are no significant differences in access to water across age groups.

Inequality in access to safe water is also pronounced when the data are disaggregated by income category. Only 54% of children in the poorest 20% of households have access to water on site, while 93% of those in the richest 20% of households have this level of service. In this way, inequalities are reinforced: the poorest children are most at risk of diseases associated with poor water quality and the associated setbacks in their development.

Children's access to basic sanitation

This indicator shows the number and proportion of children living in households with basic sanitation. Adequate toilet facilities are used as proxy for basic sanitation. This includes flush toilets and ventilated pit latrines that dispose of waste safely and that are within or near a house. Inadequate toilet facilities include pit latrines that are not ventilated, chemical toilets, bucket toilets, or no toilet facility at all.

A basic sanitation facility was defined in the government's *Strategic Framework for Water Services* as the infrastructure necessary to provide a sanitation facility that is "safe, reliable, private, protected from the weather and ventilated, keeps smells to a minimum, is easy to keep clean, minimises the risk of the spread of sanitation-related diseases by facilitating the appropriate control of disease carrying flies and pests, and enables safe and appropriate treatment and/or removal of human waste and wastewater in an environmentally sound manner".[8]

Adequate sanitation prevents the spread of disease and promotes health through safe and hygienic waste disposal. To do this, sanitation systems must break the cycle of disease. For example, the toilet lid and fly screen in a ventilated pit latrine stop flies reaching human faeces and spreading disease. Good sanitation is not simply about access to a particular type of toilet. It is equally dependent on the safe use and maintenance of that technology; otherwise toilets break down, smell bad, attract insects and spread germs.

Good sanitation is essential for safe and healthy childhoods. It is very difficult to maintain good hygiene without water and toilets. Poor sanitation is associated with diarrhoea, cholera, malaria, bilharzia, worm infestations, eye infections and skin disease. These illnesses compromise children's health and nutritional status. Using public toilets and the open *veld* (fields) can also put children in physical danger. The use of the open *veld* and bucket toilets is also likely to compromise water quality in the area and to contribute to the spread of disease. Poor sanitation undermines children's health, safety and dignity.

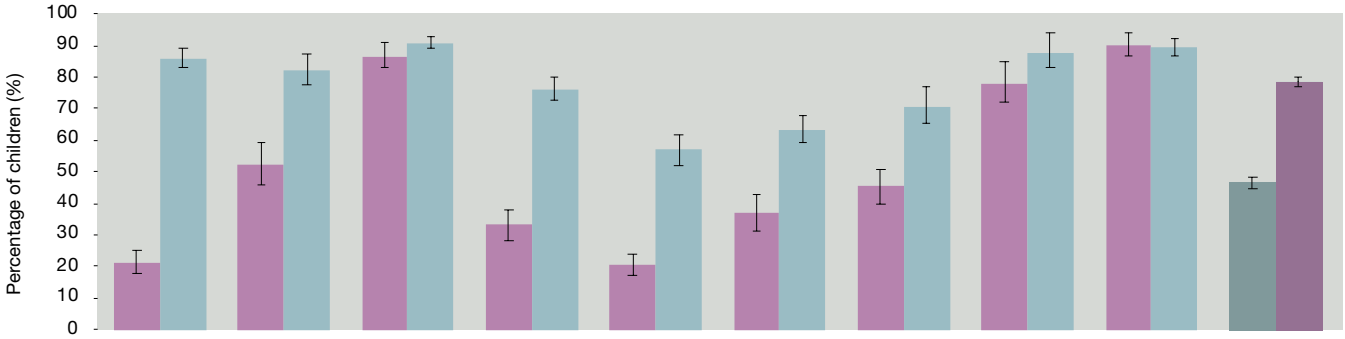
The data show a gradual and significant improvement in children's access to sanitation since 2002, although the share of children without adequate toilet facilities remains worryingly high. In 2002, less than half of all children (46%) had access to adequate sanitation. By 2018, the share of children with adequate toilets had risen to 79%. But 4.2 million children still use unventilated pit latrines, buckets or other inadequate forms of sanitation, despite the state's reiterated goals to provide adequate sanitation to all and to eradicate the bucket system. Over 340,000 children have no sanitation facilities at all (open defecation). Children (21%) are slightly more likely than adults (18%) to live in households without adequate sanitation facilities. This is because children are more likely than adults to live in poor and rural households.

As with other indicators of living environments, there are great provincial disparities. In provinces with large metropolitan populations, like Gauteng and the Western Cape, around 90% of children have access to adequate sanitation, while provinces with large rural populations have the poorest sanitation, and in Limpopo only 57% of children have adequate sanitation at home. Those with the greatest improvements in sanitation services are the Eastern Cape (where the number of children with access to adequate sanitation more than tripled from 626,000 to nearly 2.2 million, KwaZulu-Natal (an increase of 1.8 million children) and Gauteng (an increase of 1.2 million children with adequate sanitation facilities on site). In the Free State the share of children with sanitation improved from 53% in 2002 to 82% in 2018).

Although there have also been significant improvements in sanitation provision in Limpopo, this province still lags behind, with only 57% of children living in households with adequate sanitation. It is unclear why the vast majority of children in Limpopo are reported to live in formal houses, yet access to basic sanitation is the poorest of all the provinces. Definitions of adequate housing such as those in the UN-HABITAT and South Africa's National Housing Code include a minimum quality for basic services, including sanitation.

The statistics on basic sanitation provide yet another example of persistent racial inequality: more than 95% of Indian, White and Coloured children had access to adequate toilets in 2018, while only 76% of African children had access to basic sanitation.

Figure 7b: Children living in households with basic sanitation, by province, 2002 & 2018



	EC	FS	GT	KZN	LP	MP	NW	NC	WC	**SA**
2002	21.4%	52.5%	86.7%	33.4%	20.6%	37.0%	45.3%	77.7%	90.0%	46.5%
	626,000	525,000	2,549,000	1,384,000	499,000	562,000	528,000	309,000	1,448,000	8,427,000
2018	85.7%	82.1%	90.6%	76.2%	57.0%	63.4%	70.8%	87.5%	89.4%	78.6%
	2,155,000	839,000	3,793,000	3,188,000	1,354,000	1061,000	979,000	381,000	1,762,000	15,508,000

Source: Statistics South Africa (2003; 2019) *General Household Survey 2002; General Household Survey 2018*. Pretoria: Stats SA.
Analysis by Katharine Hall & Winnie Sambu, Children's Institute, UCT.

This is a marked improvement from 37% of African children in 2002. Children in relatively well-off households have better levels of access to sanitation than poorer children. Among the richest 20% of households, 94% of children have adequate sanitation, while 71% of children in the poorest 20% of households have this level of service.

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About the *South African Child Gauge*

The *South African Child Gauge* is an annual publication of the Children's Institute, University of Cape Town, that monitors progress in the realisation of children's rights. Key features include a series of essays to inform national dialogue on a particular area that impacts South Africa's children; a summary of new legislative and policy developments affecting children; and quantitative data which track demographic and socio-economic statistics on children.

Previous issues of the *South African Child Gauge*:

2019: Child and adolescent health: Leave no one behind

2018: Children, Families and the State

2017: Survive, Thrive, Transform

2016: Children and social assistance

2015: Youth and the intergenerational transmission of poverty

2014: Preventing violence against children

2013: Essential services for young children

2012: Children and inequality: Closing the gap

2010/2011: Children as citizens: Participating in social dialogue

2009/2010: Healthy children: From survival to optimal development

2008/2009: Meaningful access to basic education

2007/2008: Children's constitutional right to social services

2006: Children and poverty

2005: Children and HIV/AIDS

All issues of the *South African Child Gauge*
are available for download at www.ci.uct.ac.za

The Children's Institute, University of Cape Town, has been publishing the *South African Child Gauge*® every year since 2005 to track progress towards the realisation of children's rights.

The fifteenth issue of the *South African Child Gauge* draws attention to the lifelong impact of poor nutrition and identifies critical points for intervention across the life course – motivating for urgent and early investment in order to reduce the burden of stunting, obesity and non-communicable diseases; enhance children's health, education and employment prospects; and break the intergenerational cycle of poverty, ill-health and malnutrition

The Children's Institute aims to contribute to policies, laws and interventions that promote equality and improve the conditions of all children in South Africa, through research, advocacy, education and technical support.

> The *Child Gauge* collates and interrogates the latest research evidence from a child-centred and policy perspective. In the process of seeking to make research relevant and accessible to policymakers and practitioners, it helps to identify blind spots, knowledge gaps and areas for further enquiry.
>
> **Linda Richter, Distinguished Professor - DSI-NRF Centre of Excellence in Human Development, University of the Witwatersrand**

> The annual *South African Child Gauge* is without question the pre-eminent national publication on the subject of children, and society owes a debt of gratitude to the Children's Institute for this evidence-led investment in the future.
>
> **Jonathan Jansen, Distinguished Professor, Faculty of Education, University of Stellenbosch**

> Within the South African context, the *Child Gauge* fulfils a three-fold purpose. First it mobilises the resources of the university to promote engaged scholarship that seeks to better understand and address the challenges faced by South Africa's children. Second, it makes this evidence accessible to those in government who are responsible for the design and delivery of services for children. Last, but not least, it supports the efforts of civil society and an informed citizenry who can then challenge rights violations and hold government accountable.
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> **Benyam Mezmur, Special Rapporteur on children and armed conflict in Africa - African Committee of Experts on the Rights and Welfare of the Child, and member of United Nations Committee on the Rights of the Child**

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