Ending stunting: Transforming the health system so children can thrive

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The World Health Organisation (WHO) defines health as "a state of complete physical, mental and social well-being",[1] and affirms "the highest attainable standard of health as one of the fundamental human rights of every human being"[2]. The South African Constitution entrenches a broad range of socio-economic rights which extend beyond the right to basic health-care services to cover key determinants of child health – such as food security, nutrition, water, housing and social assistance – all of which are essential for children to survive, thrive, and develop their full potential.

This essay focuses on undernutrition and resultant stunting,[i] identifying key interventions both within and outside the health-care system that can prevent these and enable children to not only survive, but to thrive and develop their full potential. This necessitates a strengthening of primary health care with its focus on community and primary-level health care, actions to address the social determinants of poor health,[3] and an expanded role for community health workers (CHWs).

The essay addresses the following questions:

- What are the key drivers of child mortality?
- Why are South Africa's children stunted and failing to thrive?
- What is needed to ensure that children enjoy optimal nutrition?
- What can the health-care system do to ensure children thrive?

What are the key drivers of child mortality?

The Millennium Development Goals (MDGs) aimed to reduce the under-five mortality rate (U5MR) by two thirds between 1990 and 2015. Yet, despite significant gains driven by the roll-out of the Prevention of Mother-to-Child Transmission (PMTCT) programme in South Africa, progress has slowed. In 2015 the U5MR stood at 37 deaths per 1,000 live births: nearly double the MDG target of 20 deaths per 1,000 births.[4] Greater effort is therefore required if South Africa is to achieve the Sustainable Development Goal of 25 deaths per 1,000 live births by 2030.

Children under five years old die overwhelmingly of complications around the time of birth (such as preterm birth and low birth weight), and of preventable communicable diseases. Today the leading causes of under-five mortality are neonatal deaths (>30%), gastroenteritis (9%) and suspected pneumonia (17%); together they have surpassed HIV/AIDS (9%).[5] Trauma and injuries, high-risk behaviour such as substance abuse and unsafe sex,[6] and a growing epidemic of diet-related non-communicable diseases and trauma are the major causes of deaths amongst older children and adolescents.[7] Undernutrition due to inadequate dietary intake plays a major contributory role in all these causes of young child morbidity and mortality, and it underlies approximately 60% of all child hospital deaths.[8] Although figures for South Africa are unavailable, the WHO estimates that undernutrition contributes to about 45% of deaths in children under five years of age globally.[9]

These conditions remain prevalent because the social determinants of health and access to good health care are unequally distributed. Young children remain disproportionately concentrated in poorer households, and in rural areas and provinces,[10] where adverse environmental factors – especially poor sanitation and inadequate supplies of safe water – and poorer, less accessible health services contribute to high death rates. Children in the poorest fifth of households are four times more likely to die before their first birthday than those in the richest households.[11] African children, rural children, and those whose mothers lack formal education are also at greater risk.[12]

Why are South Africa's children stunted and failing to thrive?

Stunting is a manifestation of chronic undernutrition, and prevalence remains discrepantly high in South Africa, as an upper middle-income country, with an estimated 27.4% (1.58 million)[13] children under the age of five being stunted.[14] Moreover, there is little evidence that this rate has changed significantly over the past 20 years.[15]

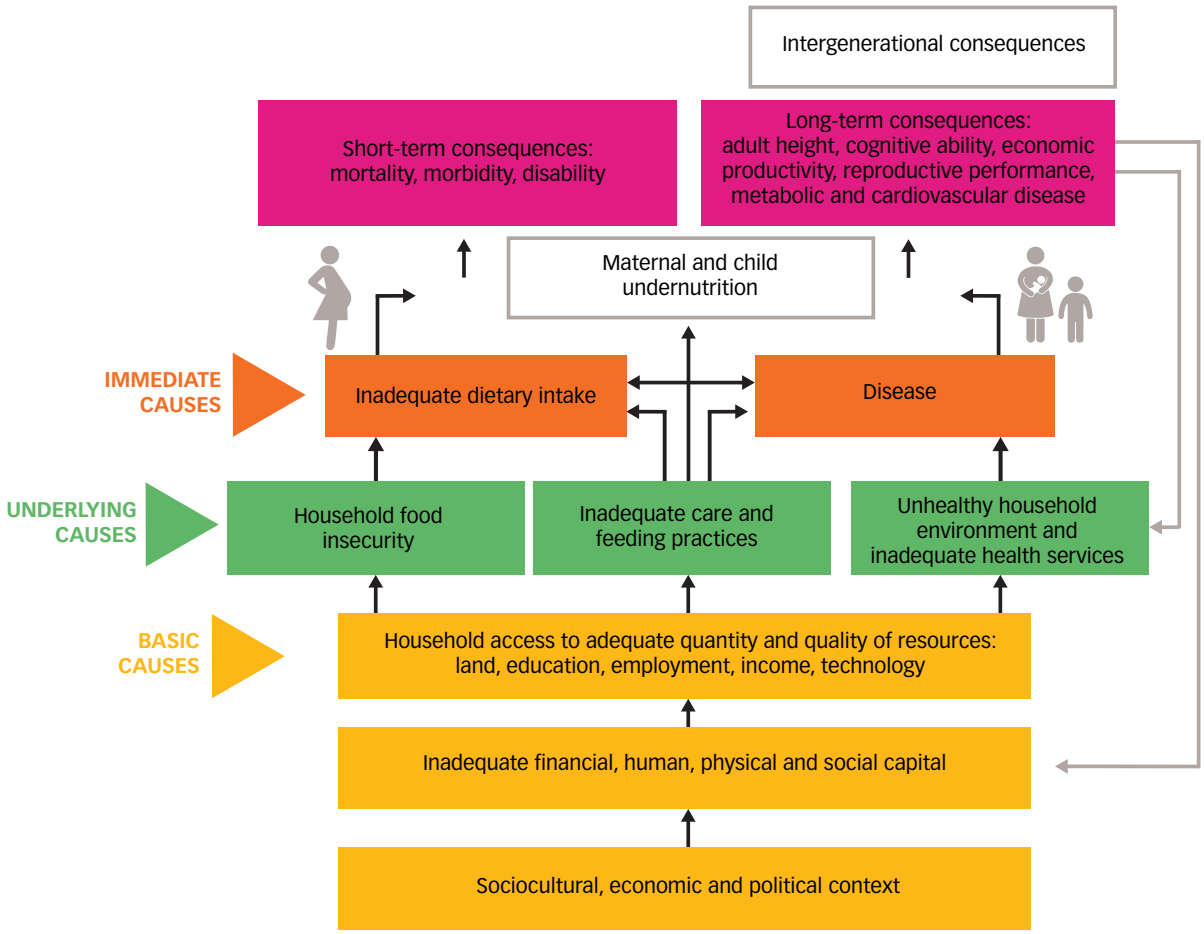
Maternal nutritional status both before and during pregnancy is a risk factor for low birth weight which predisposes to stunting in childhood.[16] Stunting in the first five years is more damaging than later in life, resulting in both an increased risk of severe infection as well as intellectual impairment – compromising children's school performance and employment prospects, and increasing the risk of obesity, heart disease and diabetes in adolescence and adulthood. Stunting during the first two years of life is particularly damaging, and may be irreversible.[17] Stunting hampers the development of human capital, and of society, and results in substantial long-term health costs.

What is driving this persistently high burden of undernutrition? UNICEF's conceptual framework for undernutrition (figure 17) identifies a range of contributory factors that operate at different levels.

The immediate causes – inadequate dietary intake and disease – mutually reinforce each other within the household.

i Stunting is defined as a height-for-age below minus two standard deviations from the median of the WHO Child Growth Standards.

Figure 17: Immediate, underlying and basic causes of maternal and child undernutrition



The grey arrows show that the consequences of undernutrition can feed back to the underlying and basic causes of undernutrition, perpetuating the cycle of undernutrition, poverty and inequality.

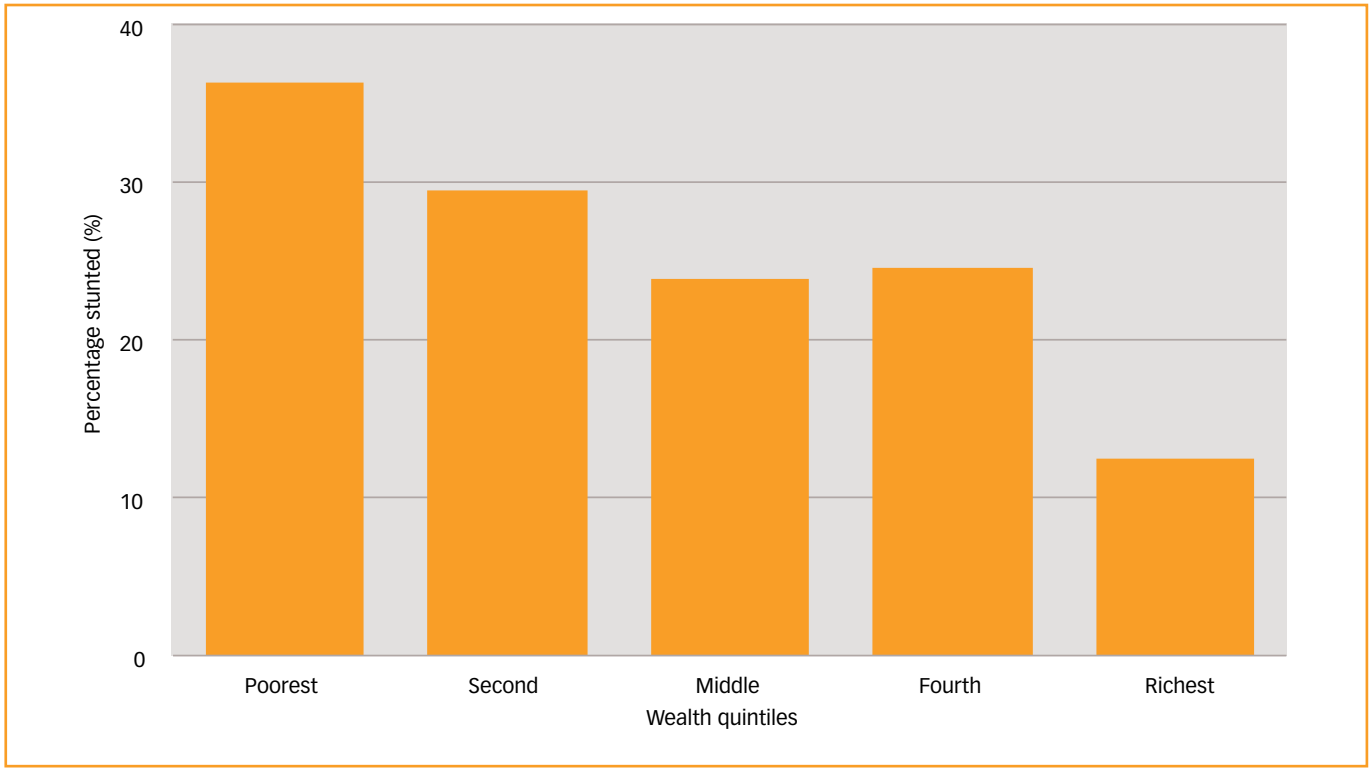
Source: United Nations Children's Fund (2013) *Improving Child Nutrition: The Achievable Imperative for Global Progress*. New York: UNICEF. P. 4

These immediate causes are underpinned by food insecurity, sub-optimal caring practices (such as inadequate breastfeeding), contaminated environments and unhygienic practices – especially poor handwashing. Child care and feeding practices are also closely linked to a mother's emotional state. Maternal depression, especially during the postnatal period, may compromise attachment and therefore infant feeding. While 44% of infants are exclusively breastfed in the first two months of life, this drops to only 24% of infants 4 – 5 months old.[18] This is a considerable improvement on the previously documented 8%, but still well below the target of universal exclusive breastfeeding for the first six months. Moreover, given the importance of complementary feeding, it is worrying that only 23% of children aged 6 – 23 months meet the criteria for a minimum acceptable diet.[19] The 2016 Demographic Health Survey indicates that stunting rates exceed 30% at birth and rise to over 40% at 18 – 27 months. This suggests that maternal factors (undernutrition, infection and substance abuse during pregnancy) are significant for the newborn, and that the complementary diet is inadequate during late infancy and early childhood. The percentage of South African households with inadequate access to food decreased marginally from 24% in 2010 to 22% in 2016, yet it remains a source of concern that almost a quarter of all households remain food insecure in a country that normally produces a surplus of food.[20] This indicates slow progress in addressing household food insecurity.

Poor sanitary environments are increasingly implicated in chronic enteric inflammation,[ii] undernutrition and its consequences.[21] Just over 30% of South Africa's children have poor access to adequate water and sanitation, with rates as high as 45% of children (8.2 million) in rural areas. Twelve percent of children live in traditional housing (2.2 million) and a further 11% (2 million) live in informal settlements or backyard shacks where access to services is limited.[22] This translates into 5 – 6 million children being at risk of repeated infection and the "stunting syndrome"[iii].

ii Inflammation of the internal lining of the intestine due to repeated infection.
iii Stunting syndrome is a condition in which multiple pathological changes marked by linear growth retardation in early life are associated with increased morbidity and mortality, reduced physical, neuro-developmental and economic capacity and an elevated risk of metabolic disease in adulthood.

Figure 18: Prevalence of stunting among children under five years old, by wealth quintile,[iv] 2016



Source: 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.

The structural or basic causes of stunting include low levels of maternal education, inadequate household income and unemployment. Despite a decrease in the proportion of people living under the upper bound poverty line,[v] from 67% to 55% between 2006 and 2015, income poverty remains widespread.[23] Children are disproportionately affected, with nearly four million children under the age of six (63%) living below this poverty line in 2014,[24] and prevalence of stunting is highest in the poorest households (as illustrated in figure 18).

South Africa's high rate of unemployment is the most important driver of poverty. The percentage of households with no link to the formal labour market increased dramatically from 30% in 1997 to 42% by 2008.[25] Unemployment stood at 27.7% in the first quarter of 2017 with an expanded unemployment rate of 36.4% if we include discouraged work seekers. Moreover, unemployment is highest amongst young adults in the reproductive age group, with 49.5% of youth 20 – 24 years old not in employment, education or training.[26]

At a broader level climate change, resulting in increasingly frequent droughts, flooding and global warming, is undermining food security and leading to conflict and human migration on an unprecedented scale.

What action is needed to ensure that children enjoy optimal nutrition?

The first 1,000 days (from conception to the age of two years) is recognised as a particularly critical period that sets both the foundation and the trajectory of a child's development (see case 8 on p. 72). It is therefore vital to intervene early to improve outcomes and reduce inequalities.

The underlying determinants of nutrition include poverty; food insecurity; inadequate child care; and poor access to health, water, and sanitation services. Efforts to promote optimal nutrition thus need to start in the antenatal period, or even before, and extend beyond interventions in the health-care system (e.g. breastfeeding and complementary feeding, nutrient supplements and disease treatment) to include nutrition-sensitive programmes that draw on complementary sectors such as agriculture, social protection, early childhood development, education, water and sanitation.[27] Achieving this will require concerted action from the government, private sector and civil society to address the immediate, underlying and structural causes of undernutrition.

Adequate dietary intake

Good maternal nutrition especially during pregnancy and preferably before conception is essential. Diets should provide adequate energy and protein, together with iron and folate supplementation

iv A quintile is 20% (a fifth) of the population.
v The lowest possible poverty line (valued at R779 in 2011 prices) that allows for both minimum nutritional requirements and essential non-food expenses.

and other micronutrients and calcium to improve maternal health and birth outcomes.[28] Breastfeeding is recognised as the most potent of all child health interventions,[29] and it is urgent that the prevalence of breastfeeding – especially exclusive breastfeeding in the first six months of life – be increased.

Further interventions to improve dietary intake in the first 1,000 days include nutrition counselling, and access to nutritious weaning foods, especially in poor households. Achievement of such improvements in infant and young child feeding will require improved growth monitoring and breastfeeding support and dietary counselling by CHWs and health-centre staff. For example, studies conducted in South Africa and elsewhere have demonstrated that support by lay counsellors can significantly increase breastfeeding rates.[30] However, while nutrition education can have positive results in food-secure populations, it is of little benefit in food-insecure populations unless combined with food supplements.[31]

Early recognition and treatment of disease within the community

Undernourished children are at risk of infectious diseases, especially diarrhoea and pneumonia. They also take longer to recover. To break the cycle of inadequate food intake and disease it is essential to identify and treat intercurrent infections[vi] early. Such early recognition and action are best achieved by well-trained and supported CHWs who are well placed to make good use of the Road-to-Health Book. Educating families and communities about healthy and hygienic practices, and helping caregivers to identify when an infant or young child is ill and in need of medical care are also vital to improve health and nutrition outcomes.

Improved care and feeding practices

Improved access to child-care services is closely linked to women's empowerment. There is overwhelming evidence that improving formal female education protects against stunting in childhood and leads to improved child health outcomes. Protection increases with the level of formal education,[32] as illustrated in figure 19.

Yet "[m]ost black children continue to receive an education which condemns them to the underclass of South African society, where poverty and unemployment are the norm … children inherit the social station of their parents, irrespective of their motivation or ability".[33] Unless the state acts effectively to address the education crisis, the risk of intergenerational undernutrition will persist.

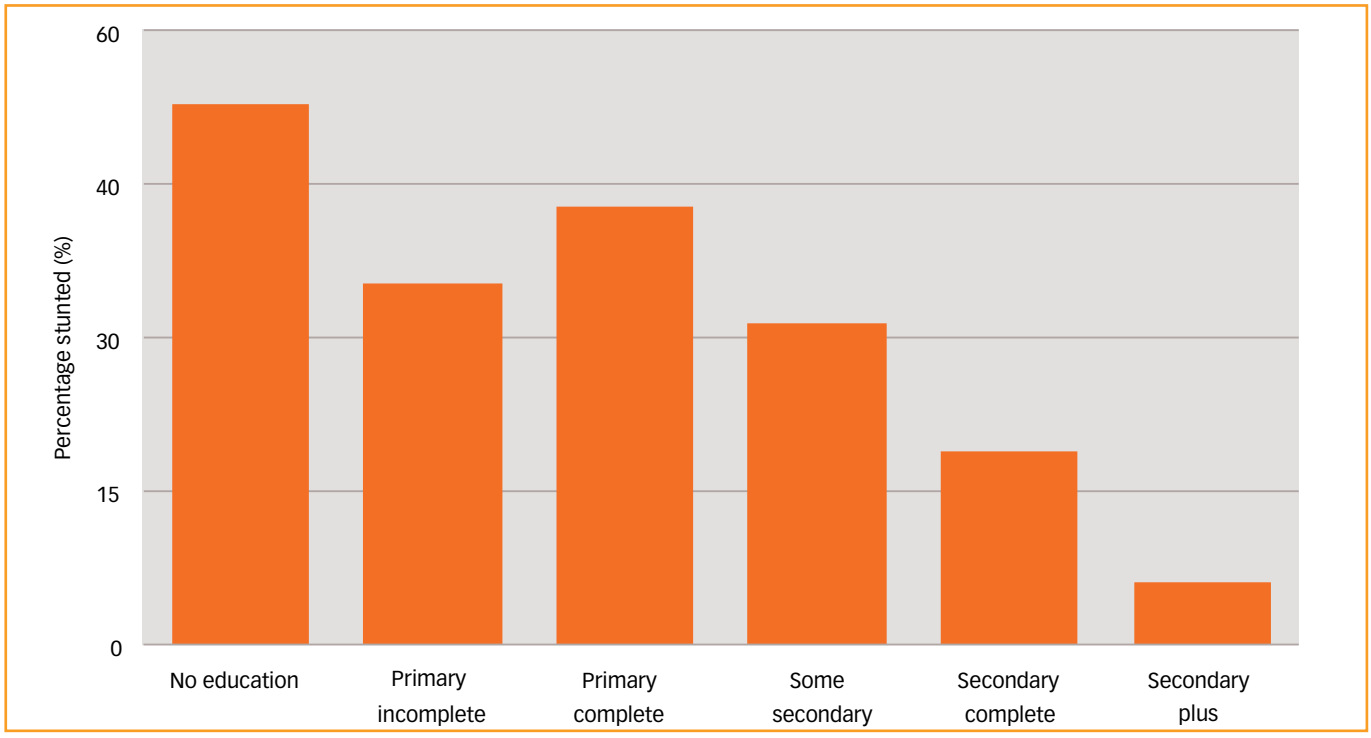
Healthy household environments and access to services

Prevention of common infections in children requires effective delivery of water and sanitation as well as adequate housing to minimise overcrowding. While considerable progress has been made in providing housing and basic services, a significant number of the most vulnerable children still live in cramped, overcrowded and unsanitary conditions.

Access to primary health-care facilities has similarly improved over the past decade, yet more than 20% of South Africa's children still live more than 30 minutes from their health facility.[34] Limitations in community-based child health services threaten the PMTCT programmes,[35] and young children continue to die outside health facilities even in settings close to major hospitals[36].

Government's plans to establish a National Health Insurance (NHI), re-engineer primary health care and invest in CHWs have the

Figure 19: Prevalence of stunting among children under five years old, by level of maternal education, 2016



Source: 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.

vi More than one infection occurring at the same time.

Case 8: Beyond nutrition – Nurture and support in the first 1,000 days

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The first 1,000 days of life are recognised as a particularly critical period that sets both the foundation and the trajectory of children's growth and development. While the negative impacts of poor nutrition and substance abuse are well-known, recent advances in neuroscience, neurobiology and epigenetics highlight the impact of "toxic stress" and the socio-emotional determinants of risk in the first 1,000 days. Here the stresses associated with poverty, intimate partner violence, single parenting, a lack of support, and the parent's own adverse childhood experiences are transmitted from caregiver to child, stimulating the release of cortisol and serotonin and causing long-term damage to the developing brain and immune system.[37] Yet support and caring relationships during pregnancy and the first two years of life can help mitigate these risks, promote resilience and protect children from the negative effects of toxic stress (see essay on care on page 51).

These scientific advances have significant implications for the design and delivery of health-care services which are the primary point of contact for children and caregivers in the first 1,000 days. To promote children's health and optimal development, key areas for intervention and systems strengthening include:

- *Support for the mother or caregiver:* Health-care services need to start by recognising the central role of the mother or caregiver in ensuring infant and child health. Psychosocial and mental health risk screening and support should therefore be incorporated into routine antenatal care, and structured opportunities should be provided to discuss parenting and infant development. For example, the WHO Care for Development package[38] could be incorporated into the training of both nurses and community health workers. Home visits provide a further opportunity for reaching out and supporting vulnerable children and caregivers and facilitating their access to health care and other support services.
- *Multi-sectoral referral:* Health care services should adopt a multi-sectoral approach as caregivers and infants during the first 1,000 days require comprehensive interventions, extending beyond immunisation, growth monitoring and the integrated management of childhood illnesses. Referral pathways should therefore facilitate access to social and material support[39] including birth registration, social grants, child care and ECD services.
- *Measures and tools to promote optimal development:* We need to develop more comprehensive measures of child health and development that capture what it means for children to thrive. This extends beyond physical measures such as low birth weight, growth faltering and stunting, to include measures of cognitive, social and emotional development (see, for example, the Shanarri Child Wellness Indicators[40] on p. 57). Such measures will need to be accompanied by tools that enable health workers to identify risk and protective factors, and guide counselling and support for caregivers and families.
- *Reorientation and training of health professionals:* Health workers will require training to play a more empathetic role, and services will need to be re-orientated to allow staff time to provide supportive counseling. Growth monitoring and developmental screening need more attention, and these points of contact need to be recognised as opportunities to direct caregivers to care and support services.

potential to address these challenges and ensure more equitable access to quality care.

Household food security

In addition to the provision of meals in early childhood development (ECD) centres and the establishment of food distribution centres, social assistance – especially the Old Age Grant and Child Support Grant (CSG) – provides a crucial safety net for poor households, and plays an important role in improving child welfare and nutrition.[41] Yet ECD centres currently cover a minority of young children and annual increases in the CSG have been below the rate of food price inflation, threatening its efficacy. It is essential to increase the coverage of ECD centres (and ensure that access is free) as well as coverage of other community-based nutrition programmes. The possibility of linking receipt of the CSG to a basket of subsidised healthy foods is worth considering.

In the short and medium term, improved access will require greater regulation of the prices of basic foodstuffs and implementing fiscal policies, such as taxes on unhealthy food products like sugary beverages. The revenues generated from such taxes could then be ring-fenced to subsidise nutritious foods – such as whole grains, milk, fruit and vegetables. To address the basic causes of undernutrition and stunting requires actions to improve incomes, including raising the value of the CSG and providing employment opportunities, especially to women.

Political commitment to addressing inequality

Household food insecurity is inextricably linked to rising inequality (see the essay on p. 43), and rooted in its structural determinants including stagnant economic growth, rising unemployment, inequitable land distribution and deregulation of trade and financial flows. Addressing these basic causes of undernutrition requires political commitment by government and includes land and agrarian reform, job creation, redistribution, tax and food price controls.

Hunger and food insecurity – including calorie-rich but nutrient-poor diets – underlie both childhood stunting and the rising prevalence of obesity. While the drivers of this "double burden" of

malnutrition are complex, there is evidence that the relatively recent transition to a diet containing a significant and increasing proportion of highly processed foods is a central determinant.[42]

This dietary transition is strongly associated with the increasing dominance of "Big Food" – large commercial entities that dominate the food and beverage environment.[43] The rise of Big Food in South Africa is a feature of neoliberal globalisation, where financialisation and deregulation of trade and investment are dominant features. Addressing this phenomenon will require government commitment and alignment of policies across the departments of Trade and Industry, Agriculture, and Health to promote food security. Such government commitment is unlikely to be achieved without increasing awareness and action by an active citizenry both within South Africa and globally to reform the current national (and global) food system.

These structural causes lie largely outside the immediate ambit of the health sector. But the Department of Health could, and should, take the lead in mobilising other government departments to address these broader social determinants of child health as outlined in the Global Strategy for Women's, Children's and Adolescents' Health and the Sustainable Development Goals (SDGs) (as outlined on p. 25).

What can the health system do to ensure children thrive?

The planned NHI scheme aims to ensure access to quality, essential health care and financial protection for all in line with the SDG target of universal health coverage. To strengthen the public health sector in preparation for the NHI, the Health department started a programme of re-engineering primary health care which includes the introduction of Ward-based Primary Health Care Outreach Teams (WBOTs).[44] The teams include six CHWs and four home-based carers supervised by a nurse.

CHWs represent an important resource for improving coverage of primary health care and extending key health interventions to vulnerable and under-served communities. In other countries, CHWs perform a wide range of essential functions including the community management of HIV and TB. Given appropriate training, support and recognition, they can also recognise and start early treatment of life-threatening conditions like pneumonia, diarrhoea, acute undernutrition and malaria as well as promote neonatal care.[45]

The success of this approach depends critically on adequate numbers of well-trained and supported CHWs with secure employment and good working conditions. Yet the majority of the 70,000 CHWs in South Africa work as volunteers or for a stipend, where payment is often erratic. Their work exposes them to the risks of violence and communicable diseases, and they have little protection or support from local health facilities. Most are currently focused on home-based care and HIV and TB treatment adherence, and will require further training and reorientation to realise their potential in maternal and child health and development.

In particular, CHWs should be empowered to promote and support breastfeeding, improve complementary feeding, encourage household hygiene and hand washing, and recognise and respond to acute childhood infections, especially diarrhoea. Their potential role in growth promotion needs to be strengthened through focused training and increased contact with local health facilities undertaking growth monitoring.

Mortuary evidence[46] indicates that significant numbers of young children die outside health facilities of acute infections, which highlights the central role of CHWs in the prevention and treatment of potentially lethal common infections like pneumonia and diarrhoea. Yet, in South Africa, CHWs' proposed scope of practice is mainly confined to undertaking household registration and providing information and advice.

The Department of Health should take more account of the impressive gains in child survival made in other lower- and middle-income countries that have used CHWs in the management of common childhood diseases, as well as recent local evidence that CHWs, when properly trained and supported, can successfully undertake important maternal support and child health interventions.[47]

The NHI plan grossly underestimates the number of CHWs that will be needed to fulfil this meaningful role in maternal and child health. Each CHW is expected to cover 250 households. Given the large burden of disease and crowded households this ratio is likely to be ineffectual. Brazil and Rwanda have CHW-to-population ratios of 1 : 800 and 1 : 255 people respectively. In Ethiopia, a two-tier system operates: trained CHWs called health extension workers based at health outposts are supported by a volunteer cadre known as the health development army who are responsible for promoting essential family practices.[48] In South Africa, increasing the total number of generalist community-based workers to achieve a ratio of at least one CHW to 1,000 population would have the additional advantage of creating employment for women, thereby promoting improved household income and health benefits, especially for children.[49]

CHWs played a key transformative role during the anti-apartheid struggle by mobilising communities for improved social and environmental conditions and medical care. Realising CHWs' potential to address social determinants of child health today will require a radical shift in thinking as well as practical training and support in community development. This in turn will require strengthening the training of environmental health practitioners and other cadres responsible for addressing environmental and social determinants of health so that they can support CHWs in this role. Clearly, the strengthening of the district health system through WBOTs will require support from higher levels of the health system. This demands greater nutrition literacy and improved practice of health workers, especially nurses. It also necessitates enhanced management and leadership capacity, especially at the level of the District Health Management Team as well as the continuing expansion and strengthening of District Clinical Specialist Teams – with a clear mandate to reach out beyond health facilities to support community-based services and promote intersectoral collaboration to address social determinants of health at district level.

Case 9: Philani mentor mothers – Key ingredients for community-based care

Ingrid le Roux, Nokwanele Mbewu & Claudine Bell (Philani Maternal, Child Health and Nutrition Project)

Philani's mentor mothers support women through their pregnancies and the early development of their children. Each mentor mother is responsible for 400 – 500 households and promotes antenatal care, birth preparation, HIV and TB testing and adherence to treatment, maternal and child nutrition. They are also trained in mental health, basic counselling, early childhood development and stimulation.

The Mentor Mother Programme draws inspiration from the Nurse Home Visiting Programme[50] and Positive Deviant Model[51] which recognises how some women in very poor communities develop coping mechanisms that enable them to raise healthy children. Philani actively seeks out these women to serve as mentors and provides them with ongoing training, supervision and support.

The mentor mother model rests on five key pillars: a careful recruitment process; appropriate training; a home-based, action-orientated health intervention; in-the-field supervision and support; monitoring and performance feedback.

Home-based interventions focus on pregnant women and children but include everyone in a household. Instead of trying to solve the family's problems during the home visits, the mentor mother shares her coping skills and knowledge and helps the family find their own solutions. Building trust and respectful relationships are important parts of the intervention.

The programme only works in a community if it has been invited and community structures help identify "positive deviants" and these women are then carefully interviewed before being invited to attend the training.

The initial six-week training course is based on adult learning principles and alternates theory and practice. Ongoing training takes place in the field and is supplemented with monthly training sessions with coordinators and programme managers.

Support and supervision are an essential part of the mentor mother model. A staff nurse or a senior mentor mother supervises and supports small groups of mentor mothers, and further mentoring and support are provided by the coordinator (usually a nursing sister). All support staff – including the coordinator – are in the field interacting with mentor mothers and their clients every day. Time is set aside for debriefing on problem cases and feedback on performance.

Outcomes are actively monitored, including antenatal clinic attendance, HIV and TB testing, treatment and adherence, low birth weight, exclusive breastfeeding, grants up-take and nutritional rehabilitation.

The programme has proven effective. Findings from a randomised control trial show improved condom use, exclusive breastfeeding rates and height-for-age measurements: after a year, the malnutrition rates in the Philani intervention areas were half of those in the control areas.[52]

The Mentor Mother Programme operates in the Western and Eastern Cape, and was extended to Swaziland and Ethiopia in 2012. For more information, see: *www.philani.org.za*

An expanded role for health services in promoting ECD

The 2015 National Integrated Early Childhood Development Policy[53] outlines a range of essential services for pregnant women and young children – including health care, nutrition, parent support and early stimulation – and requires the Department of Health to play an expanded role in promoting ECD, especially in the first 1,000 days of life, as outlined in case 5.

Effective ECD programmes are essential to promote optimal survival, nutrition, cognitive development, subsequent schooling performance and later employability. Yet at least 60% of children under five years old have no access to ECD services and programmes – the vast majority from disadvantaged backgrounds, where good quality ECD services are likely to have the most impact.[54] The ECD Policy therefore prioritises these children and specifies that very young children should ideally be reached at household and community level, rather than through centre-based programmes. This requires greater emphasis on home-visiting programmes led by community-based ECD workers of different kinds, including CHWs.

In South Africa, a review of home-visiting programmes in vulnerable rural communities through the Sobambisana project indicated significant changes in parenting behaviour, successful linking of families to social grants and other services, and improved parental coping.[55] Community-based workers have been effective in mobilising communities to take up services and to demand greater government accountability for service provision. For example, in Nepal local women facilitated support groups to discuss maternal and newborn health problems and formulate strategies to address these – leading to changes in care-seeking practices and hygiene, transport schemes and child health funds, and reducing neonatal mortality by 30%.[56] Similarly, a number of South African community-based ECD interventions use community workers to raise awareness and bring together local and district government and other service providers to facilitate access to services which form an important safety net for young children and their caregivers. These community workers also provide stimulation for early learning, parenting support advice and nutrition support within a basket of ECD services.[57]

In South Africa, there are a number of promising small-scale models of community-based health and ECD services, including the Philani Mentor Mothers' Programme[58] (see case 6). Pilot projects that upscale such services to district level should be established and thoroughly evaluated in representative peri-urban and rural districts to inform later roll-out in districts across the country.

Conclusion

Addressing the challenges of child ill health, undernutrition and stunting and ensuring the conditions necessary for children to thrive will ultimately involve successfully confronting their basic causes (see figure 17). These include widespread poverty, increasing inequality, and suboptimal public services. These causes are rooted in an inequitable economic system and poor governance at national, provincial and local government levels.

Effectively confronting these will require not only a public health system that is greatly strengthened for better health care delivery, especially at the district and sub-district levels, but also concerted action to improve the functioning of other state sectors. Action is needed at all levels – from primary care and service provision at the local level to land reform and trade policy at a national level, as well as global efforts to mitigate and adapt to climate change.

At the core of such transformation are good and accountable leadership and a fairer economic dispensation where social justice and the public good are valued above profit. The SDGs outline a global commitment to address poverty, hunger, climate change and inequality. But achieving these goals in practice will require a radical change in the dominant economic paradigm at a global level, and open and transparent government at national level together with a mobilised citizenry supported by an "activist" health service that promotes citizen action towards Health for All.

South Africa needs a broad social movement for child health equity, akin to that mobilised by the Treatment Action Campaign to advocate for universal access to antiretroviral medicines and drugs needed for opportunistic infections. Similar to the TAC's campaign, this demands a multi-pronged strategy that includes popular education and mobilisation, advocacy and litigation around children's rights, and the building of alliances across different sectors and constituencies, including, crucially, poor communities and children themselves.

Child health professionals and advocates have a key supportive and facilitatory role to play in the establishment of such a movement.

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