

NUTRITION AND FOOD SECURITY FOR CHILDREN UNDER 5

1 Introduction

In the mid-1990s, government introduced the Integrated Nutrition Programme. It aimed to improve the health of the poor by delivering a range of nutrition-specific interventions (e.g. vitamin supplementation, deworming, and nutrition education) and complementary interventions (e.g. the provision of water, sanitation and income support to indigent households). However, malnutrition remains a significant challenge. The most recent data shows that one in four children aged 1–3 years are stunted, which is higher than in countries with comparable levels of income. Malnutrition contributes to the relatively high levels of sickness and death among children: of the children who died before age 5 in 2008, more than 60% were underweight and 30% were severely malnourished.

Persistently high child mortality led the Department of Performance Monitoring and Evaluation in the Presidency to commission an evaluation of systemic issues that affect access to 18 nutrition interventions for pregnant women and children under 5. A performance and expenditure review (PER) was subsequently commissioned to assess the cost of these interventions. The PER provides:

- A review of current expenditure on these interventions;
- A detailed analysis of their demand, cost and expenditure drivers;
- An assessment of the level of funding required to achieve current policy goals; and
- Recommendations for improving the linkage between policy goals and programme design.

The PER also developed a costing model that allows policymakers to test the financial implications of various policy options. Note, however, that data limitations affected the comprehensiveness of the report. The PER was conducted by Cornerstone Economic Research between November 2014 and October 2015, and the full report and model are available at: www.gtac.gov.za/programmes-and-services/public-expenditure-and-policy-analysis.

2 Institutional context

In 1994, government implemented the Primary School Nutrition Programme to support children over 6 years of age. Around the same time, the Minister of Health appointed the Nutrition Committee, which developed the integrated nutrition strategy. This strategy was built around three components – nutrition promotion, community-based nutrition programmes, and health facility-based services. It was incorporated into the 1997 *White Paper for the Transformation of the Health System in South Africa*, and led to the development of the Integrated Nutrition Programme. The goals of the latter programme were to:

- Ensure optimal growth of infants and young children.
- Promote the health of women, in particular pregnant and lactating women.
- Maximise the number of mothers who breastfeed their babies exclusively until 6 months of age and continue to breastfeed them until 24 months, while introducing other appropriate foods.
- Prevent an increase in mortality due to so-called ‘lifestyle diseases’.
- Improve the capacity of communities to solve the problems of malnutrition and hunger.
- Improve inter-sectoral collaboration and community ownership of nutrition programmes.

The incorporation of the Integrated Nutrition Programme into the White Paper on Health implied that the national Department of Health was to lead it. However, because the programme uses a range of approaches to improve nutrition, such as health facility programmes, community-based



programmes and child grants, most of its spending on child nutrition is through departments such as Social Development and Agriculture. Community-based programmes aim to strengthen household food security, improve knowledge of nutrition, support the care of women and children, and promote a healthy environment. Nutrition promotion aims to promote breastfeeding, market suitable infant foods and fortify food. Two of the largest components of spending on child nutrition are cash transfers to poor households, through the child support grant and the social relief of distress grant. Only nutrition programmes run through health facilities – nutrition education, growth monitoring, and micronutrient and food supplementation, as well as the clinical treatment of moderate and severe malnutrition – involve direct spending by the Department of Health.

This PER focused solely on child nutrition, while the Integrated Nutrition Programme has a broader focus, including older children, pregnant and lactating mothers, people with chronic illness and elderly persons at risk. It was thus largely impossible to determine which portion of a programme's component activities provided specific, quantifiable and costable benefits to children. In addition, many nutrition-specific services (e.g. deworming) are components of a wider package of services, whose impact extends beyond nutrition. For example, provincial departments of agriculture run various programmes to assist farmers and improve food security, but as these are not designed specifically to improve child nutrition, data on their effect on child nutrition is not collected.

A further complication is that the impact of spending on nutrition-specific programmes depends critically on factors that are not specific to nutrition. Nutrition outcomes in communities with poor water and sanitation facilities, for example, are always inferior to those in areas where water and sanitation facilities are of a high standard. Given the many determinants of nutrition outcomes and underlying causes of malnutrition, improvements in child nutrition cannot be credited to individual sectors or interventions. No single sector has a large enough influence on malnutrition on its own.

3 Expenditure

Given the diverse, multifaceted character of the interventions, reporting on nutrition-related expenditure needs to be disaggregated by department.

3.1 Health

A number of budget programmes and sub-programmes of the national and provincial departments of health deliver nutrition-related services, but it is largely impossible to establish how much of this spending reaches children, much less young ones. At national level, the two programmes on primary health care services (which includes health promotion and nutrition) and on HIV and AIDS, tuberculosis, maternal and child health together spent about R40 million in 2013/14.

Expenditure on the nutrition programmes of provincial departments fell from about R240 million in 2011/12 to R185 million in 2013/14. However, reporting on these figures seems to be inconsistent. For example, some provinces show that nearly 70% of spending is on personnel and others show zero spending on personnel (which must be reported elsewhere).

The most easily identified spending on child nutrition is the purchase of baby and special food. Here, provincial spending fell from nearly R300 million in 2011/12 to under R230 million in 2013/14, largely because of a policy decision that provinces should not buy baby formula for children whose mothers could breastfeed. However, not all provinces saw proportionate changes in spending. The PER finds that the incidence of spending on baby food does not match the incidence of child poverty. The poorest provinces, where malnutrition is likely to be higher, spend

proportionately less than some richer ones. This is also true of spending on baby and special food by hospitals (a proxy for the treatment of severe, acute malnutrition), where some poor provinces spend disproportionately little. This suggests unmet demand for health spending on child nutrition.

3.2 Social development

By far the most significant spending that supports child nutrition is the monthly child support grant of R295. These are paid to the caregivers of some 3.3 million children under 5 (or about 95% of children under 5 in the three lowest household income quintiles). The total cost of this grant exceeded R11.5 billion in 2013/14.

A further R533 million was provided to the South African Social Security Agency for purchasing food parcels and providing food vouchers for households qualifying for social relief of distress grants. At the start of 2014/15, food parcels were valued at R1 100 per month and vouchers at R1 350 per month, but these figures were halved in an effort to stretch the budget. Because these grants are made to households, it is not possible to estimate spending on children under 5.

The Department of Social Development administers subsidies for early childhood development centres. Spending on these subsidies has grown rapidly, reaching about R1.6 billion in 2013/14. Half of the subsidy is to be spent on nutrition, with menus having to be approved by the relevant provincial department. The subsidy covered an estimated 412 000 children nationwide, or about 30% of children aged 3–5 who live in households in the two poorest income quintiles. Coverage levels for children in these quintiles were highest in the Western Cape and lowest in KwaZulu-Natal.

3.3 Agriculture sector

Food security as a sub-programme or objective is the most obvious place to record expenditure on nutrition-sensitive agricultural interventions. However, many relevant activities can just as logically be recorded against other sub-programmes. Analysis of the food security objective revealed no logical way of attributing expenditure to nutrition-related interventions.

3.4 Estimating current spending on child nutrition

Given the difficulties in identifying nutrition-related spending, especially spending specifically targeted at children, assessing how much government currently spends on child nutrition requires a number of assumptions and the modelling of the associated costs. The resulting estimate is that spending on child nutrition amounted to R10.3 billion in 2015/16. Of this, R7.7 billion was spent on the activities, grants and subsidies administered by the Department of Social Development, R2.5 billion by Health, and R30 million by Agriculture.

4 Costing model

The PER developed a costing model to assist policymakers in understanding the resources needed to deliver the nutrition-specific interventions for children under 5 envisaged by the Integrated Nutrition Programme. The model uses available data and makes informed assumptions of the costs of various services. It is flexible, allowing users to vary both coverage parameters (i.e. who should benefit from the intervention) and the level of support. Note, however, that because there was no data on the impact or quality of specific interventions, the model is driven exclusively by the number of intended beneficiaries rather than metrics on the intended impact of the interventions.



While various scenarios can be costed, the PER reports on three: a *full-cost scenario* in which the full range of services is provided to all, as per the current policies; an estimate of what is currently being spent; and an estimate of the costs of a policy to prevent malnutrition rather than treating it. In broad terms, *current spending* is about R10.3 billion, or 30% less than the estimated R14.7 billion needed to deliver the full range of services. The *prevention-first scenario* costs little less than the *full-cost scenario* in 2015/16 (R13.2 billion), but the costs of treatment should fall over time. (These figures are based on the assumption that only half the early childhood development subsidy and the child support grant is used for nutrition, and thus only half of their respective costs are included. If the full cost to government is used, *existing policy* costs R14.9 billion, the *full-cost scenario* requires nearly R18 billion, and the *prevention-first* option requires about R18.7 billion.)

The model suggests that existing spending falls short of policy commitments (as per the *full-cost scenario*). The main reasons relate to health interventions and early childhood development:

- *Health interventions* currently cost government an estimated R2.5 billion. To meet the need for these interventions, however, a further R2.9 billion would be required. Much of this cost would comprise the training of health service workers.
- Subsidies to *early childhood development centres* cover less than one-third of children from households in the three poorest quintiles; raising this figure would necessitate an increase in spending of R3 billion (half of which is assumed to be spent on nutrition).

The costing model breaks down spending by department and by function, offering considerable functionality for policymakers and planners. It also estimates the total cost of particular interventions and the number of children that need to be covered.

An important insight is that the treatment of individual cases of severe or moderate malnutrition consume far more resources per person than would a prevention-focused approach. Table 1, which reports the relative costs of different interventions, shows that the opportunity cost of treating one case of severe acute malnutrition (SAM) is foregoing 226 preventative interventions.

Table 1: The relative costs of health interventions

		Preventative interventions	Growth monitoring and feeding	Moderate acute malnutrition	SAM without medical complications	SAM with medical complications
Cost of interventions	R291	R291	R1 385	R11 613	R13 692	R65 826
Preventative interventions	R291	1				
Growth monitoring and feeding	R1 385	5	1			
Moderate acute malnutrition	R11 613	40	8	1		
SAM without medical complications	R13 692	47	10	1	1	
SAM with medical complications	R65 826	226	48	6	5	1

5 Conclusion

The inability to separate spending on child nutrition, the lack of data on the quality and impact of particular interventions, and the fact that many other factors influence nutritional outcomes make it impossible to assess the efficacy of current interventions. Some findings are, however, relatively clear and uncontroversial:

- The cheapest interventions are the promotion of exclusive breastfeeding during infants' first six months. The cost involves training medical staff on the topic and requiring them to dedicate some time during existing clinic visits and check-ups to promote breastfeeding.



- Access to clean water and modern sanitation significantly affects people's nutritional status.
- Micronutrient supplementation and deworming are also low-cost interventions. Vitamin A supplementation can be delivered as vitamin tablets given to children every six months, and food fortification can provide other key micronutrients if the relevant legislation requires this.
- Improving the nutritional content of early childhood development menus and ensuring that food vouchers funded by the social relief of distress grant are used primarily for nutritionally dense foods would also improve the impact of spending. Neither of these interventions would necessitate higher spending.
- Training early childhood development staff and social workers in improving household nutrition would improve health outcomes at low cost to government.
- Expanding access to the child support grant may well be the easiest way of reaching many at-risk children. Coverage levels are already high, except for some children under 3. Ensuring the automatic enrolment of all babies born at public health facilities would address this concern.

