

Projection of interventions for the reduction of chronic malnutrition in Mozambique from 2010 to 2020

Observation platform of the National Health Observatory, made up of a multidisciplinary team to generate information on women's and children's health & nutrition.

Introduction

Chronic malnutrition is a public health problem affecting mainly children under the age of five, particularly in developing countries, where about half of all deaths among children in this age group are attributed to malnutrition. The Government of Mozambique recognizes chronic malnutrition as the main nutrition problem in the country and needs a multisectoral approach to reduce it as per the Multisectoral Action Plan for the Reduction of Chronic Malnutrition (PAMRDC 2011-2015-20) and the Government's Five-Year Program 2015-2019. The PAMRDC set a target to reduce chronic malnutrition in Mozambique by 20% in 2020 and the PQG reduced the target for 2019 to 35%. On the other hand, the World Health Assembly (WHA) held in May 2012, set global targets for the reduction of malnutrition by the year 2025, which include a 40% reduction in the number of children with chronic malnutrition. 3

To inform evidence-based decision-making, several countries have been using the Lives Saved Tools (LiST) tool, which is a program that models the impact of changes in the coverage of interventions on maternal and child mortality. This abstract describes the impact of changes in the coverage of the interventions in chronic malnutrition by the year 2025.

Methodology

For the analysis of the impact of coverage of the interventions in the reduction of chronic malnutrition, 16 interventions available in the LiST1 tool with proven efficacy were selected. 13 of these interventions in the area of women and children (family planning, intermittent preventive treatment for malaria during pregnancy, mosquito nets treated with insecticide/ indoor residual spraying, supplementation with iron and folic acid, balanced energy supplementation, micronutrient supplementation including fortification of food and MNPs, calcium supplementation, complementary feeding, kangaroo mother care, promotion of exclusive breastfeeding and continued breastfeeding for at least 2 years, zinc supplementation, rotavirus vaccine, vitamin A supplementation) and in the area of water, sanitation and hygiene (washing hands with soap, connecting water at home, using latrines or flush toilets).

For the analysis of the indicators, targets were set by creating 2 settings:

Setting 1 (C1): From 2010 to 2015, the real targets defined by PARMDC for Mozambique and the Sustainable Development Goals (WHA) were projected;

Setting 2 (C2): National coverage rates for interventions for the years 2011 and 2015 were used; a coverage target for 2025 was set using the highest wealth quintile (Q).

1 The Republic of Mozambique's Proposal for the Government Five-Year Program 2015-2019.

2 Republic of Mozambique Multisectoral action plan for the reduction of chronic malnutrition in Mozambique from 2011 to 2020)

3 WHO. Nutrition. Global Targets 2025. To improve maternal, infant and young child nutrition. Disponivel online em: <https://www.who.int/nutrition/global-target-2025/en/>

4 Sachdev HPS, Hall A, Walker N, Development and use of the Lives Saved Tool (LiST): A model to estimate the impact of scaling up proven interventions on maternal, neonatal and child mortality, Int J Epidemiol, 2010;39 Suppl 1.

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The analysis was done based on program LiST (Lives Saved Tools, version 5.68) using data on coverage of interventions between 1997 and 2015 from population-based surveys (IDS 2011, MICS 2008 and IMASIDA 2015) conducted in the country over the past 18 years.

Notes on the creation of the settings:

C1: The projection was made based on retrospective data on the national coverage and targets from PAMRDC and WHA. As the interventions showed progress based on the previously and subsequently set goals, the final goal for 2025 was projected.

C2: The second setting was created using retrospective data on the national coverage, based on the assumption that the entire population had equal access to interventions, in other words, that everyone had equal coverage to the wealth quintile (Q5), the richest population, and the goal for the subsequent years up to 2025 was projected. It should be noted that these realistic goals were set by a multidisciplinary and multisectoral panel from the Women and Child Health & Nutrition Platform of the National Health Observatory that attended the LiST Workshop on the nutrition, in Maputo, June 2018.

Results

Question 1: How many cases of chronic malnutrition among children under 5 years of age would be prevented by 2020 if we reached the coverage of the highest quintile (Q5)?

Settings	Years											Total cases of chronic malnutrition prevented
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Setting I	0	12,309	28,935	47,080	66,157	78,319	86,815	94,860	102,645	110,076	117,073	744269
Setting II	0	13,000	31,973	51,014	71,592	84,844	92,239	99,612	106,933	114,137	121,223	786567

Setting 1: If we reached the coverage of the highest quintile (Q5), using the current coverage (IDS 2011, IMASIDA 2015), 744,269 cases of chronic malnutrition among children under 5 years of age would be prevented.

Setting 2: If realistic targets were used, 786,567 cases of chronic malnutrition among children under 5 years of age would be prevented.

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Question 2: How many deaths among children under 5 years of age would be prevented in 2020 if we reached the coverage of the highest quintile (Q5)?

Settings	Years											Total deaths prevented
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Setting I	0	874	3,720	6,723	8,930	11,152	12,906	13,831	14,642	15,757	16,833	105368
Setting II	0	1,100	4,085	7,133	9,226	11,239	12,968	13,886	14,697	15,804	16,867	107005

Setting 1: If we reached the coverage of the highest quintile (Q5), using the current coverage (IDS 2011, IMASIDA 2015), 105,368 deaths among children under 5 years of age would be prevented.

Question 3: What will be the prevalence of chronic malnutrition:

- A. if we keep the current coverage?
- B. if we reach realistic targets?

For Setting 1, if we reach the coverage of the highest quintile (Q5) using current coverage (IDS 2011, IMASIDA 2015), the prevalence of chronic malnutrition will be 40.46% in 2020.

For Setting2, if realistic targets are used, the prevalence of chronic malnutrition will be 40.36% in 2020

Question 4: Will the targets set by PAMRDC be reached? And by the World Health Assembly (WHA)?

Settings	Years											Expected Reduction by 2020 (n/ percentage)
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
Setting I	1,855,698	1,859,998	1,851,415	1,843,811	1,834,489	1,833,094	1,869,506	1,896,769	1,918,195	1,933,525	1,942,412	-0.046728509 (-5%)
Setting II	1,855,698	1,885,739	1,905,199	1,915,855	1,913,910	1,909,735	1,901,575	1,894,210	1,886,886	1,879,280	1,871,218	-0.00836343 (-1%)

For Setting 1, if we reach the coverage of the highest quintile (Q5) using current coverage (IDS 2011, IMASIDA 2015), the **prevalence of chronic malnutrition will be 40.5% in 2020, thereby not reaching the target set by PAMRDC (40.46% in 2020)**. However, in the same setting, it will be possible to have a reduction of -5% in the number of children under 5 years of age with chronic malnutrition. This means that, **in 2020, the prevalence of chronic malnutrition will be 38%, thereby reaching the target set by the World Health Assembly.**

For Setting 2, if we use realistic targets, the **prevalence of chronic malnutrition will be 40.4 % in 2020, thereby not reaching the target set by PAMRDC (20% in 2020)**. In the same setting, it will be possible to have a reduction of -1% in the number of children under 5 years of age with chronic malnutrition. This means that, **in 2020, the prevalence of chronic malnutrition will be 42%, thereby not reaching the target set by the World Health Assembly.**

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Recommendations:

- o For the reduction of chronic malnutrition among children under 5 years of age by the year 2020, there is a need for using more realistic targets such as those set by the multidisciplinary and multisectoral panel from the Women and Child Health & Nutrition Platform of the National Health Observatory. These targets are best suited to our current context and will allow for the prioritization of interventions and proper implementation of the program policies.
- o The limitations of this analysis, which focus more on health sector indicators, must, therefore, be recognized. There is a need for using other analysis tools that include indicators from other relevant sectors, such as agriculture, fishing, etc.

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