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Policy Brief: Kisumu County

Demonstrating the Value of Multi-Sectoral Nutrition Investments

Introduction

Over the last decade, Kenya has made great strides in addressing undernutrition. Nationwide, the stunting rates for children under the age of five improved from 26% to 18%. The decline was attributed to national campaigns to enhance good nutrition at every stage of life. The program is tagged *Malezi bora* in Swahili, and includes deworming, immunization, vitamin A supplementation to boost immunity, enhancing partner collaboration to leverage resources for nutrition interventions, and the implementation of nutrition action plans and policies. Despite progress, malnutrition in Kisumu remains a major public health problem. Stunting level stands at 9.1%, wasting at 3%, and underweight at 3.5% (KDHS, 2022).¹ In Kisumu County, the main determinants of malnutrition are high poverty rates with the urban poverty rate at 70%, coupled with increasing household food insecurity (KDHS 2014).² The unemployment rate is more than 50% with a high dependency ratio at 87% (Labour Force Report, 2019)³ coupled with high HIV prevalence in the region, which creates a precarious scenario, predisposing the general population to both immediate and underlying causes of malnutrition (NACC, 2018).⁴ However, the county government demonstrates political commitment for preventing malnutrition by investing in the scale-up of low-cost high-impact nutrition interventions centering on the multi-sectoral approach to solve malnutrition. Tackling stunting, wasting, and hidden hunger is of paramount importance as it has far-reaching effects beyond health and nutrition, leading to poor cognition and socio-behavioral development, as well as affecting work productivity and the economic potential of an individual and society.

Methodology

The County Nutrition Investment Cases advocate for increased investment in nutrition interventions. Each Investment Case consists of three modules: (i) cost of hunger—the economic cost of malnutrition, through its burden on the health, education, and productivity sectors in the county; (ii) summary of the county MSN plan; and (iii) scale-up analysis—health impact and economic analysis for the proposed nutrition interventions.

Key Messages

- Invest in nutrition for guaranteed value for money and an essential path to reaching national and county aspirations.
- Consider multi-sectoral nutrition (MSN) approach at the center of government planning.
- Involve the county leadership for a sustainable financing approach to nutrition.
- Support the generation and use of critical nutrition data to guide planning and budgeting for nutrition in the county.
- Enhance cross sector and sectors joint advocacy toward MSN investment.

¹ Government of Kenya, Kenya National Bureau of Statistics – The Kenya Demographic Health Survey Report, 2022.

² Government of Kenya, Kenya National Bureau of Statistics – The Kenya Demographic Health Survey Report, 2014.

³ Government of Kenya, Kenya National Bureau of Statistics- The Labour Force Report, 2019.

⁴ Government of Kenya, National AIDS Control Council, Kenya HIV Estimates Report, 2018.

The Cost of Malnutrition

Health Impacts

The Cost of Hunger in Africa (COHA) study in Kenya⁵ and the National Nutrition Action Plan⁶ highlighted the high levels of child undernutrition and its lasting health and human capital consequences for the country. USAID Advancing Nutrition applied the COHA model during the development of this County Investment Case to estimate additional cases of morbidity, mortality, school repetitions, school dropouts, and reduced physical capacity that can be directly associated with undernutrition in children under the age of five for the baseline year 2022. Estimates are that 9.1% of children under the age of five (KDHS, 2022), which is equivalent to 16,158 children in Kisumu County, were stunted. Furthermore, malnutrition causes an estimated 5,327 cases of low birthweight and 6,215 babies are underweight, annually. Overall, undernutrition in Kisumu County costs the health system approximately KSh 63 million per year (US\$ 0.61 million). The COHA model was customized with the new KDHS data 2022 to generate the results reported in this section.



Multi-sectoral nutrition benefits Kisumu County residents. Photo Credit: Lorraine Opondo/County Department of Health

Human Capital and Economic Impacts

In addition to the impact of stunting on the health of individuals, it also affects cognitive development in children, and in turn, reduces a child's educational performance, resulting in increased grade repetition and dropouts. Estimates show that there are 226 cases of grade repetition in the county annually due to stunting, which costs the education system and families an estimated KSh 2.77 million (US\$ 26,628) annually.⁷

In addition, stunting affects future economic productivity due to increased mortality (i.e., loss of workforce) and lowered labor productivity across the key sectors in Kisumu County such as manufacturing; infrastructure; water, sanitation, and hygiene (WASH); forestry; fisheries; and agriculture.⁸ From the COHA analysis, based on 2022 KDHS data, estimates show that the annual losses in economic productivity due to malnutrition in Kisumu County are KSh 63 million (US\$ 0.61 million) for health care costs, KSh 2.77 million (US\$ 26,628) for education costs, KSh 4.7 million (US\$ 45,279) for agriculture sector costs, KSh 0.7 million (US\$ 6,743) for WASH costs, and KSh 0.6 million (US\$ 5,780) for social protection costs (Kisumu MSN Joint Action Plan, 2022/23). Other enabling sectors that contribute to losses in economic productivity, such as infrastructure, media, communication, and trade, account for the remaining KSh 80 million (US\$ 0.77 million). Overall, total annual cost of malnutrition in the county is equal to KSh 151.77 million (US\$1.45 million), which represents 0.07% of its gross county product.

⁵ Government of Kenya 2019, Cost of Hunger in Africa (COHA) study in Kenya.

⁶ Government of Kenya, 2018. Ministry of Health, National Nutrition Action Plan (2017-2022)

⁷ County COHA Estimates, 2022

⁸ Agriculture activity is low in Kisumu compared to other counties (GCP, KNBS, 2019).

Kisumu County MSN

Cost of Implementing High-Impact MSN Nutrition Interventions

The total public investment required to deliver the Kisumu MSN approach is based on selected interventions across the five government sectors to drive the nutrition agenda. These nutrition-sensitive and nutrition-specific interventions will cost an estimated KSh 2.95 billion (US\$ 28.31 million) between 2023 and 2027. The MSN investments will be allocated by sector based on selected interventions, with 46% of the resources allocated to WASH interventions, 33% to education interventions, 9% to agriculture interventions, 6% to health and nutrition system, 4% to social protection, and 2% to infrastructure costs (enabling environment). The average annual cost of the MSN is KSh 590 million (US\$ 5.7 million) per year.

Cost of High-Impact MSN Interventions

Within the package of evidence-based high-impact MSN interventions selected for implementation for Kisumu MSN approach, the total costs are as follows. The total cost for nutrition-specific is KSh 0.17 billion (US\$ 1.61 million), enabling environment is KSh 0.06 billion (US\$ 0.54 million), nutrition-sensitive agriculture is KSh 0.27 billion (US\$ 2.58 million), nutrition-sensitive education is KSh 0.98 billion (US\$ 9.39 million), nutrition-sensitive social protection is KSh 0.11 billion (US\$ 1.05 million), and nutrition-sensitive WASH is KSh 1.37 billion (US\$ 13.14 million).

The Health and Economic Benefits of Investing in Nutrition

Intervention Reach

The preventative high-impact nutrition interventions within the MSN approach captured in the Kisumu County MSN scorecard will reach an average of 319,327 newborns, children, adolescent girls, and pregnant women annually. The interventions with the highest reach over 5 years will move nutrition indicators relating to treatment and management of severe acute malnutrition (SAM), vitamin A supplementation (VAS), infant and young child feeding (IYCF), and iron-folic acid supplementation (IFAS) in pregnancy.

Health Impacts

USAID Advancing Nutrition projects that nutrition interventions within the Kisumu MSN approach will have a significant impact on the health of newborns, children, adolescent girls, and pregnant women. The anticipated health impact is 1,695 additional live, non-stunted children as well as 7,893 cases of anemia averted in pregnant women and 9,932 cases of anemia averted in non-pregnant women. Overall, the projected results are 650 child deaths averted. The sum of these health impacts results in a potential 49,350 disability-adjusted life years (DALYs)⁹ averted over the 5-year period.

The estimated cost per case of stunting in children is KSh 15,929 (US\$ 152.93). Additionally, the estimated cost per case of anemia averted in pregnancy is KSh 4,067 (US\$ 39.05) through IFAS in pregnancy.

By translating the health impact into DALYs averted, we estimate that investing in high-impact nutrition interventions costs KSh 59,758 (US\$ 573.70) per DALY averted. Using a Value of Statistical Life-Year for Kenya,¹⁰ we estimate that the Kisumu MSN will yield a benefit-cost ratio of 6:1 based on 5-year investments. This return on investment indicates that for each shilling invested in MSN in Kisumu County over the 5-year period, will realize an economic return equivalent to KSh 6 at a 5% discount rate.

⁹ A DALY averted can be thought as one lost year of “healthy” life.

¹⁰ Vicusi and Masterman, 2017.

Recommendations

Invest in MSN for Guaranteed Value for Money and an Essential Path to Reaching National and County Aspirations

The high economic return, equivalent to KSh 6 for every KSh 1, calls for continued investment in MSN in the county to contribute towards improved nutrition outcomes and overall economic development. Therefore, the county government must accelerate, scale up efforts and make adequate budget allocations towards supporting nutrition-specific and nutrition-sensitive interventions.

The resources needed to implement prioritized interventions as reflected in the Kisumu County MSN Action Plan require consistent allocation by the government over the next five years. Prioritization of investments in nutrition-sensitive interventions across the main sectors of agriculture, WASH, education, health, and social protection are critical to showing the county's direct investment in MSN programming. Therefore, there is a strong case for a call to harness both domestic and external resources and to direct them to high-impact MSN interventions.

Position MSN Approach at the Center of Government Planning

Promotion of and investment in good nutrition should not be limited to the health sector in Kisumu County, but rather it should be a multi-sectoral approach unlocking the potential of the nutrition-sensitive interventions to jointly invest to optimize the benefits of reduction in malnutrition in the county.

The MSN approach is embedded in the Food and Nutrition Security policy. Therefore, overall long-term planning and implementation of this approach by the county government will contribute to increased production of nutrient-dense food and equitable food distribution to meet the needs of the population. Implementation of an MSN approach will also improve the capacity of people to implement income generating activities, which will increase revenue to purchase nutritious foods. Additionally, it will allow the most vulnerable sections of the community to access health care, consume safe water, improve hygiene and scale up environmental sanitation.

Involve County Leadership for a Sustainable Financing Approach to MSN

Domestic resource mobilization offers an optimal path to sustainable financing for nutrition interventions in Kisumu County. This calls for continued advocacy to ensure increased political, county administration, and sector leadership support for nutrition-specific and nutrition-sensitive interventions, resource allocation for identified high-impact MSN activities, and promotion of public health nutrition behaviors and practices.

Support the Generation and Use of Critical Nutrition Data to Guide Planning and Budgeting for Nutrition in the County

The MSN defines a common results measurement and accountability framework for county actions as captured by the MSN scorecard. Nutrition data (specific and sensitive) need to be routinely collected and collated from various sectors to inform planning and budgeting and provide clarity on interventions' equity and efficiency. To improve data management and its use for decision-making, Kisumu County should facilitate regular nutrition data/information review during coordination meetings and generation/dissemination of knowledge products. This should include data that provide a clear understanding of the nutrition financing landscape in the county.

Enhance Coordination of MSN Investments to Address Undernutrition

The future strategies to address under nutrition in the county need the collaboration of multiple sectors and a variety of stakeholders in government, nongovernmental organizations, the donor community, and the private sector. The burden of undernutrition cannot be addressed by nutrition-specific interventions alone without a simultaneous emphasis on addressing social determinants. These include poverty alleviation, food security, adequate hygiene, safe drinking water, school retention, and social protection alongside parallel interventions to improve agriculture, livestock, and livelihood with a focus on female empowerment and gender equity. This can only be done through a robust MSN approach and investment framework.

Resource Requirements (KSh)

High-Impact Multi-Sectoral Intervention

Health	Year 1	Year 2	Year 3	Year 4	Year 5	Total cost
ACSM and sectorial and MSN governance including coordination and legal/regulatory framework strengthened	9,000,000	11,000,000	11,200,000	12,200,000	13,200,000	56,600,000
Maternal, infant, young child (0 - 59 months) nutrition (MIYCN) scaled up	1,100,000	1,250,000	3,950,000	11,500,000	11,500,000	29,300,000
Other high impact (fortification)	1,408,000	1,600,000	1,800,000	3,200,000	4,200,000	12,208,000
Integrated management of acute malnutrition strengthened	10,208,000	11,600,000	23,200,000	23,200,000	33,200,000	101,408,000
Prevention, control, and management of micronutrient deficiencies scaled up	2,527,360	2,872,000	4,498,000	7,470,000	7,470,000	24,837,360
Administering deworming tablets to children in early childhood development centers (delivered with education dept.)	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
Administering vitamin A supplement (delivered with education dept.)	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000

Sub Total - Health	27,243,360	31,322,000	47,648,000	60,570,000	72,570,000	239,353,360
Agriculture	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost
Training farmers on integrated pest management and farmers field schools	4,000,000	4,240,000	4,500,000	4,770,000	5,000,000	22,510,000
Program for capacity building of staff and the community on food processing and agri-nutrition		21,000,000		25,000,000		46,000,000
Sensitize and train farmers on production of oil, seeds, and nuts	4,800,000	3,800,000	3,800,000	3,300,000	3,300,000	19,000,000
Increased production and consumption of vegetables	2,000,000	2,200,000	2,400,000	2,500,000	2,600,000	11,700,000
Increase poultry product production	1,200,000	1,200,000	1,300,000	1,300,000	1,400,000	6,400,000
Increase fish and fisheries production	6,000,000	6,000,000	6,000,000	6,000,000	6,000,000	30,000,000
Increased production and consumption of fruits	750,000	750,000	800,000	800,000	850,000	3,950,000
Formulate policies that address issues of subsidy	5,000,000		5,000,000	5,000,000		15,000,000
Implement policies that support agri-nutrition interventions	2,000,000	2,000,000	2,500,000	2,500,000	3,000,000	12,000,000
Recruit staff trained in agri-nutrition	6,000,000		6,000,000	7,000,000	7,000,000	26,000,000

Procure and establish post-harvest infrastructure (cold storage, solar driers, aflatoxins test kits)	21,000,000		25,000,000		30,000,000	76,000,000
Sub Total - Agriculture	52,750,000	41,190,000	57,300,000	58,170,000	59,150,000	268,560,000
Education	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost
Provision of food items for centralized feeding program	133,410,000	133,410,000	133,410,000	133,410,000	133,410,000	667,050,000
Capacity building to ECD Board of members and teachers on sustainability strategies of CFP	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	25,000,000
Conducting regular monitoring and assessments of schools	1,400,000	1,400,000	1,400,000	1,400,000	1,400,000	7,000,000
Initiation and strengthening of kitchen gardens	2,800,000	2,800,000	2,800,000	2,800,000	2,800,000	14,000,000
Conducting sensitization to policy makers and government stakeholders	300,000	300,000	300,000	300,000	300,000	1,500,000
Conduct food handling sensitization to all kitchen staff in ECDEs	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	17,500,000
Construct food storage facilities in ECDE centers	13,680,000	13,680,000	13,680,000	13,680,000	13,680,000	68,400,000
Mobilization for resources of water tanks,	7,248,000	7,248,000	7,248,000	7,248,000	7,248,000	36,240,000

taps, and boreholes						
Hold awareness meetings with parents in schools/chief barazas and conduct home visits	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000	90,000,000
Collaborate with nongovernmental stakeholders on nutrition sensitive/specific engagements	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	10,000,000
Collaborate with nongovernmental stakeholders on nutrition sensitive/specific engagements	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	10,000,000
Strengthening Growth Monitoring Program in ECDE centers	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	8,000,000
Assessment of growth monitoring and promotion	1,600,000	1,600,000	1,600,000	1,600,000	1,600,000	8,000,000
Sub Total - Education	192,538,000	192,538,000	192,538,000	192,538,000	192,538,000	962,690,000
Social Protection	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost
Cash transfer to children 0-36 months	560,000	560,000	560,000	560,000	560,000	2,800,000
Nutrition counseling	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	15,000,000
Cash plus registration of children with disability	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	5,250,000
Training of entrepreneurship skills	150,000	175,000	200,000	200,000	250,000	975,000

Linkage to devolved funds	100,000	200,000	200,000	300,000	400,000	1,200,000
Access to grants (NFDK, NCPWD)	100,000	100,000	100,000	100,000	100,000	500,000
<i>Inua Jamii</i> cash transfer	16,800,000	16,800,000	16,800,000	16,800,000	16,800,000	84,000,000
Sub Total - Social Protection	21,760,000	21,885,000	21,910,000	22,010,000	22,160,000	109,725,000
WASH	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cost
Developing new water facilities	7,500,000	15,000,000	30,000,000	60,000,000	120,000,000	232,500,000
Upgrading water facilities	26,800,000	53,600,000	107,200,000	214,400,000	428,800	402,428,800
Training communities on sustainable management of water facilities	3,430,000	6,860,000	13,720,000	27,440,000	54,880,000	106,330,000
Increase resource mobilization of WASH interventions	34,800,000	76,600,000	160,200,000	127,400,000	193,668,800	592,668,800
Development of regulatory instruments	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	35,000,000
Sub Total - WASH	79,530,000	159,060,000	318,120,000	436,240,000	375,977,600	1,368,927,600
Total Resource Needed	373,821,36	445,995,000	637,516,000	769,528,000	722,395,600	2,949,255,960



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