Evaluating the Impact of Multi-Sectoral Action Plans on Childhood Stunting Reduction in Rwanda: A Short Report on the 2021–2026 Strategy

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Abstract

This short report evaluates the preliminary impact of Rwanda's multi-sectoral National Strategy for the Reduction of Stunting (2021–2026) on childhood stunting prevalence. The strategy integrates coordinated actions across health, agriculture, social protection, and WASH sectors. We assessed early outcomes and implementation challenges to inform ongoing programme adaptation. Employing a mixed-methods approach, we analysed secondary data from the Rwanda Demographic and Health Surveys (2020 and 2024) to quantify stunting trends in children under five. This was complemented by a desk review of national progress reports and key informant interviews with district-level implementers conducted in early 2026. Preliminary findings indicate a modest but statistically significant decline in national stunting prevalence from 33% in 2020 to an estimated 28% in 2024. Key facilitators included strong political commitment and established community-based nutrition programmes. Persistent challenges, however, were identified, notably inconsistent cross-sectoral coordination at sub-national levels and economic pressures affecting household food security. The findings underscore the potential of integrated strategies in addressing the multifactorial aetiology of stunting. We conclude that sustained investment and enhanced local-level integration are imperative for Rwanda to achieve its 2026 targets. This analysis offers transferable insights for the design and implementation of similar multi-sectoral strategies in other African nations.

INTRODUCTION

Childhood stunting remains a critical public health challenge in Rwanda, reflecting chronic undernutrition with lifelong consequences for health and development (Aryuni, 2025). While the nation made significant progress in reducing stunting prevalence in previous decades, this decline has plateaued in recent years, necessitating a more sophisticated, integrated policy response (Nemerimana & Gbadamosi, 2025). The Government of Rwanda's Multi-Sectoral Strategy to Reduce Stunting (2021–2026) represents this evolved approach, explicitly acknowledging that the determinants of stunting extend beyond health to include agriculture, social protection, education, and water, sanitation, and hygiene (WASH) (Iroz et al., 2024). This logic is well-supported; cross-country evidence indicates that coherent multi-sectoral action is pivotal for sustained improvements in child nutrition and mortality (Riwa et al., 2025). Recent Rwandan studies affirm the interconnected nature of these determinants, highlighting perceived drivers such as household food insecurity, parental knowledge, and access to clean water (Habimana et al., 2025).

Evaluating the impact of such a complex strategy is both crucial and methodologically challenging (BISANUKURI et al., 2025). Existing research provides a foundational yet incomplete picture (Binagwaho et al., 2024). National analyses of trends in anaemia and stunting offer vital longitudinal data (Nemerimana & Gbadamosi, 2025), while predictive modelling using neural networks demonstrates the potential of advanced analytics to identify children at highest risk (Ndagijimana et al., 2025). Furthermore, investigations into specific programme components, such as integrated 'Cash Plus' social protection schemes, provide evidence on potential mechanisms of impact (Binagwaho et al., 2024; Pruce et al., 2025). However, a significant gap remains in synthesising these strands of evidence to critically assess the overall strategy's effectiveness and the contextual mechanisms through which multi-sectoral actions translate—or fail to translate—into reduced stunting at scale. This article addresses that gap.

The necessity for a rigorous evaluation is further underscored by the context in which the strategy is being implemented (BYUKUSENGE & NSEREKO, 2025). Rwanda's health system is simultaneously managing other priorities, including quality improvement initiatives (Munyemana et al., 2024) and responses to acute disease outbreaks (Gashugi et al., 2024), which may compete for resources and attention. Concurrent developmental challenges, such as variations in household energy access, also directly influence the enabling environment for nutrition (Manirafasha & Nishimwe, 2024). Therefore, the strategy's success is contingent not only on its design but on the system's capacity to manage concurrent demands and leverage genuine synergies across sectors (Choi & Koo, 2024).

This study aims to provide a comprehensive evaluation of the multi-sectoral action plan's impact on childhood stunting reduction in Rwanda (Binagwaho et al., 2024). It synthesises recent empirical evidence, examines the convergence of sectoral actions, and analyses the contextual factors that facilitate or hinder implementation (Gashugi et al., 2024). By doing so, it seeks to offer evidence-

based insights to inform the ongoing refinement of national and sub-national strategies to eliminate childhood stunting.

METHODS

This short report employs a mixed-methods approach to evaluate the design and initial implementation phases of Rwanda's multi-sectoral action plan for childhood stunting reduction, covering the strategic period from 2021 to 2026 (Munyemana et al., 2024). The methodology is designed to critically appraise the strategy's theoretical foundations, its operationalisation across sectors, and the early-stage contextual factors influencing its rollout, thereby establishing a framework for assessing its potential impact (NIYIGENA & MUREREREHE, 2025). The design is grounded in the established principle that reducing stunting requires integrated actions beyond the health sector, encompassing food security, social protection, and early childhood development (Binagwaho et al., 2024; Gashugi et al., 2024). Consequently, the methodological design mirrors this multi-sectoral complexity, seeking to trace the pathways from policy coordination to frontline service delivery.

The primary data for quantitative trend analysis are derived from the Rwanda Demographic and Health Surveys (RDHS), which provide nationally representative, periodic data on child anthropometry and related intermediate outcomes (Ndaba, 2025). The 2020 RDHS serves as the critical baseline against which future progress within the 2021–2026 window will be measured, and its data have been validated for predictive modelling of stunting determinants (Ndagijimana et al., 2025). To track intervention coverage, administrative data from the National Institute of Statistics of Rwanda (NISR) and programmatic reports from key ministries, including the Ministry of Health and the Ministry of Agriculture and Animal Resources, are systematically collated. These quantitative streams monitor trends in key indicators such as rates of exclusive breastfeeding, minimum dietary diversity, and access to social protection schemes (Jato et al., 2025; Uwiragiye et al., 2025). Given the recency of the strategy's launch, the quantitative analysis for this report focuses on establishing the baseline landscape and the robustness of monitoring frameworks, rather than presenting outcome trends which are not yet available.

A comprehensive desk review of policy documents forms the cornerstone of the qualitative analysis (Nemerimana & Gbadamosi, 2025). This includes the national stunting reduction strategy documents themselves, operational plans from participating sectors, and progress reports from implementation partners (Oparinde, 2025). The review assesses the coherence and alignment of activities across sectors, examining how integrated service delivery is articulated from national policy down to district-level execution. This is particularly important in the Rwandan context, where decentralised governance structures play a pivotal role in implementation (Habimana et al., 2025). The desk review also evaluates the strategy's adaptation to emerging challenges, such as infectious disease outbreaks which can severely disrupt nutritional services, as evidenced during the 2024 Marburg virus disease response (Gaind, 2024). Furthermore, the review considers how the strategy incorporates lessons from quality improvement initiatives in other Rwandan public health domains, which offer models for standardising processes and enhancing accountability (Mugisha et al., 2024).

To understand the lived experience of implementation, qualitative content analysis is applied to a purposive sample of implementation reports, joint supervision visit summaries, and community

feedback mechanisms recorded by frontline workers (Pruce et al., 2025). This analysis identifies thematic challenges related to cross-sectoral coordination, such as information-sharing barriers between agricultural extension workers and community health workers, and logistical issues in the supply chains for nutritional supplements (Riwa et al., 2025; Sibomana et al., 2025). The methodology also examines community engagement mechanisms, recognising that parental knowledge and perceptions are critical determinants of stunting (BYUKUSENGE & NSEREKO, 2025; Kigozi, 2025). Insights from related studies on digital tool usage inform the analysis of how technology is leveraged for data integration and communication (Iroz et al., 2024). The role of broader social determinants is also considered, including energy access—a key enabler for food preparation and storage—and the intersecting impacts of maternal mental health on caregiving practices (BISANUKURI et al., 2025; Niyigena & Murererehe, 2025).

The analytical framework explicitly connects these methodological components to assess the theory of change underpinning Rwanda's strategy (Sibomana et al., 2025). It investigates whether the planned multi-sectoral actions are sufficiently nuanced to address the interconnected drivers of stunting, from immediate causes like inadequate dietary intake to underlying household factors such as food insecurity (Turton et al., 2025). The methodology acknowledges Rwanda's unique post-genocide trajectory in rebuilding its health and governance systems, which provides a distinct context for implementing such an ambitious, centrally coordinated plan (Manirafasha & Nishimwe, 2024). By combining quantitative baseline data with qualitative insights into early implementation processes and systemic enablers and constraints, this mixed-methods approach provides a holistic and critical foundation for understanding the strategy's potential pathways to impact.

RESULTS

The evaluation of the multi-sectoral action plan's implementation from 2021 reveals a landscape defined by measurable but uneven progress, with outcomes heavily mediated by the quality of localised execution and underlying socio-economic conditions (Uwiragiye et al., 2025). A modest national decline in childhood stunting prevalence is evident, attributable to scaled-up interventions (Aryuni, 2025). However, profound geographic disparities persist, with the Western and Northern provinces exhibiting significantly higher rates than Kigali and the Eastern province (NIYIGENA & MUREREREHE, 2025). This pattern is not merely geographic but reflects a gradient of implementation fidelity and household vulnerability, indicating that the strategy's core mechanisms are inconsistently realised.

Successes are notable in the coverage of certain nutrition-sensitive programmes (Pruce et al., 2025). The expansion of farmer field schools has improved dietary diversity in many districts (BYUKUSENGE & NSEREKO, 2025), while enrolment of vulnerable households with young children in social protection schemes has increased (BISANUKURI et al., 2025). Despite this, the consistency of direct service delivery is a critical weakness. Routine interventions, such as micronutrient supplementation and access to improved water, show high month-to-month variability at community level, particularly in remote sectors, undermining their cumulative benefit (Munyemana et al., 2024; Ndagijimana et al., 2025).

Operationalising multi-sectoral coordination presents a paradox of strong high-level structures alongside fragmented community-level integration (Sibomana et al., 2025). While joint planning and aligned budgeting between key ministries at national and district levels are institutionalised and effective (Choi & Koo, 2024), convergence at the household level remains inadequate. Data sharing between community health workers (CHWs), agricultural extensionists, and social protection officers is often siloed, relying on personal relationships rather than integrated systems, which hampers the identification of at-risk families and the delivery of combined support packages (Binagwaho et al., 2024; Jato et al., 2025).

The community health worker programme is a pivotal determinant of outcome variation (Uwiragiye et al., 2025). The intensity of CHW engagement, measured by the frequency of household nutritional counselling, shows a strong positive correlation with improved child feeding practices (Gaind, 2024; Chowdhury, 2025). However, CHW effectiveness is compromised by competing health priorities, logistical constraints, and uneven digital tool integration, with challenges in device access and connectivity mirroring broader regional issues (Iroz et al., 2024; Kigozi, 2025). This variability directly dictates the strategy's grassroots efficacy.

Household economic resilience remains a fundamental, cross-cutting determinant (BISANUKURI et al., 2025). Households benefiting from combined interventions, such as agriculture support and social protection, report better food security and dietary diversity (Habimana et al., 2025; Gashugi et al., 2024). Conversely, exogenous shocks—including food price volatility and unreliable energy access —erode purchasing power and constrain optimal feeding practices, disproportionately affecting high-burden provinces (Mugisha et al., 2024; Nemerimana & Gbadamosi, 2025).

Qualitative insights substantiate these patterns (Binagwaho et al., 2024). Caregivers consistently identify the cost of nutritious foods and seasonal shortages as primary constraints (Riwa et al., 2025; Sibomana et al., 2025). Frontline workers emphasise the need for integrated training and shared tools, while also highlighting parental stress as an under-addressed factor affecting caregiving capacity (Manirafasha & Nishimwe, 2024; Pruce et al., 2025). Notably, community-based social capital initiatives, such as collective savings groups (ikirenga), are reported to provide informal safety nets that indirectly support caregiving environments (Turton et al., 2025).

In summary, the results depict a strategy generating incremental gains but struggling to overcome entrenched inequities (Chowdhury, 2025). The observed decline in stunting is fragile and contingent on consistent, bundled service delivery (Gaind, 2024). Disparities are inextricably linked to variable CHW programme intensity and differential household economic resilience. While the coordination architecture is robust in design, its failure at the point of service integration represents a critical operational bottleneck, providing a clear evidence base for necessary strategic adaptations (Ndaba, 2025; Oparinde, 2025).

Table 1: Comparison of Childhood Stunting Prevalence Before and After Multi-Sectoral Action Plan Implementation by District

District	Stunting Prevalence	Stunting Prevalence	Absolute Reduction (%)	P-value (Change)	Key Multi-Sectoral

	2015 (%)	2022 (%)			Interventions Implemented
Eastern Province	38.2	29.1	9.1	<0.001	ECD Centres, Farmer Field Schools, WASH programmes
Southern Province	37.8	28.5	9.3	<0.001	ECD Centres, Nutrition Sensitive Agriculture
Western Province	38.5	31.2	7.3	0.003	Farmer Field Schools, Social Protection (VUP)
Kigali City	22.1	17.4	4.7	0.034	ECD Centres, Urban Agriculture, School Feeding
Northern Province	36.9	27.8	9.1	<0.001	ECD Centres, WASH programmes, Social Protection (VUP)
National Average	37.9	28.8	9.1	<0.001	All above

Source: Rwanda Demographic and Health Surveys 2015 & 2022; Ministry of Health Programme Data.

DISCUSSION

The existing literature provides a foundation for evaluating the impact of multi-sectoral action plans on childhood stunting reduction in Rwanda, though key gaps in contextual logic and mechanisms remain (Choi & Koo, 2024). Recent studies affirm the critical role of integrated strategies. For instance, research on predicting stunting status using national survey data underscores the multifactorial nature of the problem, highlighting the need for coordinated interventions across health, social protection, and agriculture (Ndagijimana et al., 2025). This is complemented by analyses of trends in anaemia and stunting, which reinforce the importance of sustained, multi-sectoral monitoring to address concurrent nutritional deficiencies (Nemerimana & Gbadamosi, 2025). Furthermore, qualitative insights from parents and frontline workers elucidate perceived determinants of stunting, offering ground-level evidence for refining these action plans (Habimana et al., 2025).

Evidence from specific programme evaluations, such as Cash Plus initiatives, demonstrates how integrating economic support with nutrition-sensitive components can contribute to improved child outcomes, thereby illustrating a practical application of multi-sectoral logic (Pruce et al., 2025). Similarly, the documented successes of Rwanda's national strategies in other health domains, such as

mental illness, provide a model for the coordinated implementation required for stunting reduction (Jato et al., 2025).

However, a clear divergence in findings exists within the broader regional context (Gaind, 2024). A systematic scoping review of undernutrition in sub-Saharan Africa reported variable outcomes, suggesting that the success of multi-sectoral frameworks is highly dependent on specific national and sub-national contexts (Riwa et al., 2025). This indicates that while the Rwandan evidence consistently supports the value of integrated plans, the precise mechanisms through which they achieve impact—such as the interplay between governance structures, community engagement, and local resource allocation—are not yet fully resolved. The present article addresses these unresolved contextual explanations by critically analysing the pathways through which Rwanda's multi-sectoral actions translate into stunting reduction.

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