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Mushimiyimana Laurette

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Mushimiyimana Laurette

Project coordinator, Kuzamura Ubuzima, Butare University Teaching Hospital

Email of the corresponding Author: mmushime@yahoo.fr

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Abstract

Research had shown that malnourished children are more likely to be hospitalized regularly, either because they presented with associated complications of undernutrition or because they are diagnosed as malnourished upon arrival at the hospital. Thus, this paper involved a prospective cohort design to assess the impact of the Kuzamura Ubuzima (KU) nutrition support program on the nutritional status of hospitalized children and the length of hospital stay. The target population consisted of 274 patients who were beneficiaries of the KU program during the specified period. For sampling, pediatric patients enrolled in the KU program between January and July 2017 and patients with complete admission and discharge data available were considered to be part of the inclusion criteria. Document analysis review was used as the data collection instrument, which involved tracking and documenting various health and demographic parameters of the patients. Statistical analysis was performed to determine the correlation between the length of time enrolled in the KU program and improvements in nutritional status. The findings revealed that all patients were ubudehe 3 or less, and the majority of patients were classified as moderately food insecure. Surprisingly, the majority of pediatric beneficiaries were ubudehe 3. This paper concludes that undernutrition remain one of the major challenges in the area of public health, with developing countries such as Rwanda being the most affected. The study recommends there is a need to expand the Kuzamura Ubuzima nutrition program to include more hospitals and other healthcare facilities within Rwanda. Additionally, it is suggested that training sessions should be enhanced to describe the importance of proper feeding, key aspects of balanced diets, and their impact on recovery rates, thus assisting caregivers in making informed decisions about their children's nutrition both in and out of the hospital. The study also emphasizes the need for policymakers to develop and implement policies that encourage better provision of nutrition in pediatric healthcare. Furthermore, healthcare administrators, providers, community partners, and researchers to collaborate in improving nutritional outcomes for hospitalized children through measures such as post-discharge follow-up systems, partnerships with local agricultural organizations, and the integration of nutrition education into healthcare curricula.

Keywords*:* *Hospitalized children, Kuzamura Ubuzima, Nutrition support and program, Butare University Teaching Hospital, Rwanda*

1.0 Introduction

Across the world, malnutrition is still a major concern for public health, mostly in the developing world where children are most affected by stunting, underweight and wasting (Bhutta et al., 2013). These conditions are a sign of both stunted and wasting kinds of malnutrition and suggest that the body lacks primary nutrients. Malnutrition rates in these areas are consequently high, and poverty, famine, poor healthcare facilities, and improper feeding patterns can significantly influence their instances. Malnutrition is a major global challenge. The United Nations and other international organizations have been working to fight the social vice. However, millions of children still end up suffering from the disastrous impact of the vice, which leads to high child mortality rates as well as hampers the economic growth of nations. In Rwanda, Malnutrition is a rampant issue across the world, and Rwanda is not immune to this problem, with a high index of malnutrition among children. Still, higher figures for stunting and underweight have been observed, strengthening the paper's finding that this is a worrying problem (NISR, 2015; WFP, 2012).

The Rwanda DHS report shows that 38% of children under five years of age are stunted, and 14% are severely stunted. These figures suggest that the health-related situation is chronic in terms of malnutrition and results in stunted children's growth. The factors that have been singled out as having a significant impact on malnutrition in Rwandese include food insecurity, poverty, restricted healthcare access and poor knowledge about nutrition by Rwandese mothers. With high incidences of malnutrition, many children end up being hospitalized due to nutritional-related illnesses, thus being a major drain on health facilities. Nutrition is fundamental to patient outcomes and has a significant function in the overall days of stay in the hospital (Allard et al., 2015; Correia & Waitzberg, 2003). The diet can also help enhance the healing mechanism of one's body and assist in enhancing the immune system, thus improving one's health status. Among hospitalized children, nutritional support plays a vital role in the promotion of recovery, reducing the risk of adverse outcomes or treatment failure. According to research, patients with good nutrition are likely to recover faster and spend less time in hospitals. They also suffer low incidences of complications as compared to a patient suffering from undernutrition.

Nutritional interventions, consequently, are not only about putting fixes to current health challenges, which are very important, but they are also part and parcel of promoting optimum health in the future. A primary care perspective identifies that the inclusion of comprehensive and age-appropriate nutrition into healthcare practices converts efficient patient care for numerous diseases and conditions, reduces healthcare costs and enhances the quality of care for vulnerable groups, especially children. Hence, conducting of the current study was warranted due to the pressing need to address malnutrition in Rwanda, particularly among hospitalized children. By examining the nutritional status and associated factors of children admitted to Rwandan hospitals, this research aims to provide valuable insights that can inform targeted interventions and policies. The study's significance lies in its potential to contribute to improved patient outcomes, reduced healthcare costs, and enhanced quality of care for vulnerable children in Rwanda.

1.1 Statement of the Problem

Nutrition is a significant factor that determines hospital stay and recovery of Rwandan children. Infections are frequent in children because of the weak immunity they possess. As a result, they spend more time in hospitals when sick, are slower in their recovery, and even malnourished children are more prone to infections. This long-time imprisonment not only poses high risks to their health but also a heavy toll on the healthcare sector. Longer hospital stays not only raise the expenses for health treatment, service demand, and overall hospitalization, add more burden in

terms of resource utilization, and also threaten a situation where care will be scarce and therefore has to be rationed as opposed to freely provided to all patients. In addition, this can also delay the children's chance of going back to their normal lifestyles, which greatly involve learning and interrelating with peers and communities.

Malnutrition in hospitalized Rwandan children provides a clear impetus for evidence-based nutritional interventions. The provision of timely, appropriate nutritional support can lead to enhanced recovery rates, shortened hospital stays, and improved overall well-being in pediatric patients. Nutritional interventions, including dietary supplementation, nutrition education, and regular health monitoring, play a significant role in the improvement of malnourished children's nutritional status, allowing them to recover sooner and more effectively. Kuzamura Ubuzima has everything you need to fight hunger and is at the root of all of the health risks that surround malnutrition. The implementation and scaling of these nutritional support programs can mitigate the high rates of malnutrition, improve recovery outcomes, and, importantly, reduce the burden on medical care-seeking, making the healthy growth and development of children a possibility in Rwanda.

1.2 Objective of the paper

The objective of this paper was to evaluate the effectiveness of the Kuzamura Ubuzima program in improving children's nutritional status.

2.0 Literature Review

The literature review was presented in sections.

2.1 Importance of Nutrition in Patient Recovery

Proper nutrition is vital for patient recovery and has a key role in shortening the length of hospital stay. Allard et al. (2015) conducted a prospective cohort study, and they found that adult patients who spent 7 days or more in the hospital and whose nutritional status decreased stayed longer in the hospital. According to the research, malnourished patients spent an average of 16.7 days in the hospital compared to 10.1 days for well-nourished patients. The large sample size and prospective design of this study make the evidence derived from it more robust with respect to the association between nutritional status and hospital stay. However, it is limited by its exclusively hospital-focused population, which may not necessarily translate directly to the pediatric population in Rwanda. In contrast, Correia and Waitzberg (2003) used a multivariate model analysis to examine the association between malnutrition and morbidity, mortality, and the duration of the hospital stay. They observed that malnutrition made this patient category 2.5 times greater risk for morbidity and mortality.

Malnourished patients, in particular, had an increase of 27% in complications and a 12.4% higher mortality rate compared with 4.7% for well-nourished patients. This study benefits from a broad spectrum of malnutrition-related outcomes, offering a complete view of the deleterious effects of malnutrition on patient health. Still, the study ran in adults, so the generalizability is not quite there, as children might have different requirements in their nutrition and regenerative processes as compared to adults. Similarly, Norman et al. (2008) conducted a study on the prognostic impact of disease-related malnutrition, finding that malnutrition was associated with increased morbidity and mortality among hospitalized patients. Their research indicated that malnourished patients had longer hospital stays and higher healthcare costs. What is good about this study is its nuanced analysis of the economic and health consequences of malnutrition, which is important in

understanding the downstream impacts of nutrition interventions. There is a possible limitation in that there is not a detailed pathophysiology behind the different types of malnutrition and the differing impacts, which might influence the generalizability of the study to other populations of patients.

Studies by Allard et al. (2015) and Correia and Waitzberg (2003) emphasize that malnutrition has a significant effect on the recovery of the patient. These results also indicate that malnutrition results in extended hospitalization, heightened morbidity, and even increased mortality. The program could be useful in the Kuzamura Ubuzima nutrition support program, which has been established to reduce the length of hospital stay and improve upward weight-for-age trajectories on discharge from the hospital among hospitalized children (Tappenden et al., 2013). Strengths of this program include sound methodological approaches, a large patient sample, and extensive analysis of the effects of malnutrition on patient outcomes.

Nevertheless, while studies such as the one presented here have been conducted on aspects of PHC and/or (health) provider performance in some settings, there is a paucity of such research in pediatric populations and in unique sociocultural and health system contexts, such as found in Rwanda, which may limit the generalizability to the Kuzamura Ubuzima program. Furthermore, the synthetic nature of the evidence will not capture how cultural, socioeconomic, and environmental factors can help or hinder these nutritional interventions in various contexts. Nevertheless, the studies help to inform the efficacy of the Kuzamura Ubuzima nutrition support program. Specific to the needs of pediatric patients in Rwanda, the program can develop site-specific nutritional support strategies and provide evidence to guide policy and resource allocation geared towards ensuring all hospitalized children receive the nutritional support they need to optimize recovery outcomes.

2.2 Pediatric Malnutrition

2.2.1 Prevalence and Determinants of Malnutrition in Various Regions

Childhood malnutrition is a major concern in most areas globally, especially in the developing world. Brink et al. 2014 and Babatunde et al. 2011 show that malnutrition has become rampant among children due to the following factors. Another cross-sectional survey was done by Brink et al. 2014 at a pediatric ward based at the Chris Hani Baragwanath Academic Hospital in South Africa, where they established high incidences of malnutrition among admitted children. The survey established that 39% of the children were stunted, 12% underweight and 8% wasted (Abuga et al., 2008). These findings paint a sobering reality of the pervasiveness of chronic malnutrition and what it holds for child health in developing countries.

Similarly, Babatunde et al. (2011) examined the pattern and factors associated with malnutrition among children under the age of 5 years in farming households in Kwara state of Nigeria. According to the research done by Babatunde et al. (2011), of the total participants, 31 patients were in the localized group. Notably, a tiny fraction of the children were stunted (1%), while 23% of the children were underweight. According to the survey, 7% of its population under 5 years of age was underweight, and 11.5% were wasted (Babatunde et al., 2011). These were household income, education standards, quality health facilities, and the education standards of the parents. These factors point to the fact that factors other than the individual level contribute to malnutrition, including socio-economic status, education, and access to health facilities.

The study's principal assets include elaborate statistical data and a vast number of participants, which provides stable data on malnutrition rates. However, there are also some drawbacks,

including the cross-sectional study design, which determines the various determinants of malnutrition and only establishes associations rather than causality. Nevertheless, all the findings established from these studies play a vital role in responding to the issue of the impact of the Kuzamura Ubuzima Nutrition Support Program. They allow comparison with what can be expected where specialized approaches to improve nutrition are not implemented to assess the potential of such interventions to solve malnutrition and its consequences.

2.2.2 Specific Challenges of Malnutrition in Rwanda

Rwanda faces many challenges with regard to malnutrition in children, notably high rates of stunting and underweight amongst children. The Rwanda Demographic and Health Survey (NISR, 2015) shows that 38% of children under five years old are stunted, and 14% of them are severely stunted. Another 11% of Rwandan children are underweight. Food insecurity, poverty, limited healthcare, and poor feeding practices drive some of the highest rates. It reported significant regional differences as well, with more rural children showing signs of malnutrition compared to those in urban areas. The strengths of the NISR (2015) report are that it provides a thorough examination of malnutrition in Rwanda due to the comprehensive data collection and analysis conducted. MEPs also guarantee the reliability of the findings through the use of standardized anthropometric measurements. However, this reader should not make too much of this shortcoming since the report is inherently descriptive and does not pretend, nor need to diagnose the root cause of malnutrition or prescribe an intervention for it. These data will greatly assist in the evaluation of the Kuzamura Ubuzima Nutrition Support Program. Knowing these challenges and the burden of malnutrition in Rwanda will enable action to be taken to reduce malnutrition. By targeting the most affected regions and dealing with the root causes identified by the NISR report, the program will have opportunities to fine-tune its interventions to reduce stunting and underweight levels of hospitalized children.

2.2.3 How the Articles Can Help Address the Topic of Study

The quantitative studies by Brink et al. (2014), Babatunde et al. (2011), and the NISR (2015) report are useful in providing a systematic understanding of malnutrition and its determinants among children in general and in Rwanda in particular. They provided various articles that provide a crucial understanding of the prevalence of malnutrition, which is necessary for the assessment of the efficacy of the Kuzamura Ubuzima Nutrition Support Program. Firstly, the frequency data from Brink et al. (2014) and Babatunde et al. (2011) indicate that the findings portrayed in this study are not peculiar but are common in similar settings, and they include socioeconomic status and healthcare access. Such information can be useful in helping the program develop the necessary approaches to deal with these determinants. Where necessary, the program will have to come up with measures that tackle the nutritional problem and other socioeconomic issues that may accompany it. Second, more practical concerns and needs mentioned in the Rwanda context by the NISR (2015) report can further anchor the program. These high prevalence thresholds mean that interventions need to be designed with respect to regional variations in each district and the specific needs of Rwandan children. From the report, the program can thus get direction on how to help address the issues of food insecurity and lack of access to health by providing support constructs that entail but are not limited to, supplementary feeding as well as nutritional education and underlying medical services.

2.3 Impact of Nutritional Interventions

2.3.1 Evidence-Based Interventions for Improving Child Nutrition and Survival

Bhutta et al. (2008) and Bhutta et al. (2013) provide comprehensive reviews of evidence-based interventions for improving child nutrition and survival. These studies highlight several key interventions, including breastfeeding promotion, complementary feeding, micronutrient supplementation, and management of severe acute malnutrition. Bhutta et al. (2008) report that breast feeding promotion alone can prevent up to 13% of under-five deaths globally. Similarly, Bhutta et al. (2013) highlight that by averaging the effects of all interventions, 15% of child deaths could be averted. These findings are backed by strong statistical evidence, showing clear progress in child health and survival. The principal strength of the study by Bhutta et al. is the volume of between-study uniformity and meticulousness in its meta-analysis and systematic review, which surely provides a credible base for intervention recommendations. This well-rounded strategy will help to make the results applicable to a wide range of conditions and sites.

One potential limitation is that the studies are based on community interventions and may not directly apply to hospitalized patients. In contrast to the evidence-based interventions that Bhutta et al. describe, the Kuzamura Ubuzima program implementation improvements through the integration of successful approaches such as breastfeeding promotion and micronutrient supplementation, can improve its impact on the nutritional improvement and outcome of hospitalized children in Rwanda. Case studies of successful nutrition programs and their effects on health outcomes are given by Harney, 2009 and Haddad, 2016. Nutritional care guidelines in hospitals have led to better nutritional care and outcomes for patients, with lower healthcare costs and reduced hospital stays, as reported by Harney, 2009.

On average, these case studies revealed that appropriate nutrition could decrease the length of hospital stays by 2-3 days per patient. The Global Nutrition Report by Haddad (2016) showcases good case studies from different countries on interventions that have made a dent in malnutrition and child health. The strengths of these case studies are their relevance to real-world practice and detailed reporting of program processes and outcomes. Some of these reports offer real-world experience and evidence that nutrition can make a difference. However, a limitation of these programs could be that their success could be confounded by setting-specific factors such as healthcare infrastructure and health-seeking behavior, which may not translate directly into other settings. Lessons from the successful nutrition programs documented by Harney (2009) and Haddad (2016) are germane to the design/use of the Kuzamura Ubuzima program. These case studies clearly show the potential of nutritional interventions to greatly impact health outcomes and subsequently improve patient length of stay, which is the goal of the program in Rwanda. The next steps for the Kuzamura Ubuzima initiative include drawing from these effective programs further to improve the nutritional status and recovery of hospitalized children.

2.4 Socioeconomic Factors and Nutritional Inequality

Socioeconomic status (SES) is an important contributor to malnutrition and consequent health outcomes. In their comprehensive review of malnutrition in developing countries, Van De Poel et al. (2008) established that children with low SES are more at risk of malnutrition than others. Another significant effect mentioned in their work was that SES has a direct effect on food access, health care, and education – all factors that relate strongly to nutrition. For instance, low-income families' children have a poor diet in terms of food nutrient density, which leads to stunting, underweight and wasting. The study underlined the social inequalities as an area that needs

intervention to ease the burden of nutrition and health. Based on our findings, we recommend that policies intended to reduce poverty and enhance access to resources may significantly impact practical aspects of a child's health, especially in low-income countries. Norman et al. (2008) looked into SES and the accessibility of healthful food. They concluded that healthful food is less accessible in low-SES families, implying that these children are denied a basic need for nutrients. Other findings that are related to their work include economic barriers, poor education, and inadequate health services, which are some of the barriers to having a proper diet and one more correlated with malnutrition. From the information provided by the study, the disease has it that malnutrition is mostly seen in the regions where income per capita is lower; that is because families cannot afford to purchase foods that contain all elements of the key. Presumably, this relationship stresses the need to employ interventions that would tackle the economic and educational explanations of poor nutrition.

Van De Poel et al. (2008) stated that documented malnutrition rates were significantly higher among children of the lowest wealth quintile as compared with the highest wealth quintile. For instance, detail stunting was 40% in the lowest quintile and 15% in the highest quintile. Norman et al. (2008) also pointed out that children from low SES are 30% more likely to suffer from malnutrition than children from affluent families. This brings out the extensive disparities in terms of requirements and availability of energy-yielding nutrients in proportion to the socio-economic status of an individual. These studies are characterized by large sample sizes, which enhance the validity of the conclusion that socioeconomic indicators are connected with malnutrition. There is one crucial thing to note here, and that is that they only include macroeconomic data and may not give an accurate picture of the selected families. Additionally, these studies might help to explain the relationship between SES and nutrition; however, they cannot give clear guidelines for intervention.

2.5 Kuzamura Ubuzima Program

Kuzamura Ubuzima is a Rwandan hospital-based program that seeks to enhance the nutritional status of admitted children. The program was created in 2015, and it offers food product supplements, unbiased nutrition information, and general health checks for pediatric patients. It entailed using the hospital's land to cultivate fresh food, which in turn is used to provide balanced meals to the children. Caretakers and health practitioners should ensure they teach patients about nutrient-dense eating and how this enhances the recovery process.

Past assessments have indicated the effectiveness of interventions in enhancing the nutritional status of kids admitted to a hospital and decreasing their hospitalization periods. The survey conducted between January and July of 2017 reported that out of the enrolled pediatric patients, a large number of them gained substantial weight during their stay in hospitals. Also, it was found that the average hospitalization rate of children enrolled in the program was cut by 2 days. 01 days compared to others who did not attend the program.

The main assets of the Kuzamura Ubuzima program include dietary supplementation in combination with education and health control. However, a possible weakness is the fact that the source of this initiative is likely to be dependent on constant patronage, cultivation, and food preparation funds and resources. The effectiveness of the program is highly dependent on trained human resources that include staff and volunteers, which sometimes may be scarce. Socioeconomic studies and the evaluation of the Kuzamura Ubuzima program comprise a theoretical framework for the program's assessment. The analysis of socioeconomic factors

involved in incidences of malnutrition and assessment of the specialties like Kuzamura Ubuzima can provide well-founded guidelines for enhancing pediatric health care and designing policies.

3.0 Methodology

This paper involved a prospective cohort design to assess the impact of the Kuzamura Ubuzima (KU) nutrition support program on the nutritional status of hospitalized children and the length of hospital stay. The target population was 274 patients who were beneficiaries of the KU program during the specified period. For sampling, pediatric patients enrolled in the KU program between January and July 2017 and patients with complete admission and discharge data available were considered to be one of the inclusion criteria while patients with incomplete data records and patients not enrolled in the pediatrics department were taken as exclusion criteria. Document analysis review was considered as the data collection instrument that involved tracking and documenting various health and demographic parameters of the patients. Statistical analysis was performed to determine the correlation between the length of time enrolled in the KU program and improvements in nutritional status.

4.0 Findings

The findings of this paper were presented due to the objective of evaluating the effectiveness of the Kuzamura Ubuzima program in improving children's nutritional status. The tracking sheets revealed descriptive statistics of 274 total beneficiaries enrolled at KU between January and July 2017.The vast majority of patients were enrolled in pediatrics, followed by GYN/OB. All patients were ubudehe 3 or less, and the majority of patients were classified as moderately food insecure. However, it was surprising that the majority of pediatric beneficiaries were ubudehe 3. While gender distribution was equal within the internal medicine department, males outnumbered females 3:2 in both the surgery and pediatrics departments. Of the 274 patients enrolled within the studied period, only 28 patients had both admission and discharge data available, and all of these patients were found in the pediatrics department. Of these 28 patients, 19 had a positive weight gain during their hospitalization time while on KU.

When stratified by the time spent as a KU beneficiary, it was clear that the majority of the patients who had a positive weight change were those who stayed on the KU program the longest. Of the 28 pediatric patients studied, all 11 of the patients who were enrolled in KU for longer than one month had positive weight changes.Among the 28 pediatric patients, 20 and 26 patients had age and height information available, respectively. It was possible to calculate weight-for-age and weight-for-height z-score categories for these patients using internally developed scales based on standardized WHO curves. All 20 of the patients with weight-for-age data improved or had no change. This improvement trend was also seen when measuring change in weight-for-height categories; 23 of the 26 patients measured had improvement or no change.

Responses to the KU staff satisfaction surveys were fairly identical, with all respondents (management, farmers, cooks, and volunteers) saying that morale and relationships between the staff members were high and that the program was beneficial to the CHUB patient population. Qualitative comments for program improvement included increasing the number of farming tools available to cope with increased farming demand, having a display area of example seeds and crops, and providing stronger training sessions to improve staff knowledge of bio-intensive farming. Responses to the KU beneficiary satisfaction surveys were also fairly identical among respondents, with all responding that KU was a necessity and that without KU, they would not be able to find food while hospitalized.

The findings imply that the Kuzamura Ubuzima (KU) program had a positive impact on the nutritional status of hospitalized children, particularly those who remained in the program for extended periods. The improvement in weight-for-age and weight-for-height scores among the majority of pediatric patients suggests that the nutritional support provided by KU was effective in addressing malnutrition during hospitalization. This is particularly significant given the high prevalence of malnutrition among children in Rwanda and the critical role of proper nutrition in recovery and overall health outcomes. The implications of these findings extend beyond the immediate health benefits for individual patients. By improving the nutritional status of hospitalized children, the KU program may contribute to shorter hospital stays, reduced healthcare costs, and improved long-term health outcomes. Furthermore, the high satisfaction rates among both staff and beneficiaries indicate that the program is well-received and perceived as essential, suggesting its potential for sustainability and scalability. The program's success in addressing food insecurity among hospitalized patients from lower socioeconomic backgrounds (ubudehe 3 or less) highlights its role in promoting health equity and addressing broader social determinants of health.

5.0 Summary of findings

The objective of this paper was to evaluate the effectiveness of the Kuzamura Ubuzima program in improving children's nutritional status. It was found that Kuzamura Ubuzima program was established to tackle the above challenges by offering feeding support, education on nutrition, and health check-ups for children in hospitals. The anti-poverty program has many other features, which have also provided certain success, such as the use of the hospital land for the cultivation of vegetables and other produce. The assessment that was conducted between January and July 2017 to determine the effectiveness of the Program showed 274 beneficiaries in total, and the majority of them were children below the age of 18 years who were from low-income family wealth status (ubudehe 3) and were moderately food insecure. Of 28 pediatric patients, information was collected and analyzed. Nineteen patients showed positive weight changes during the period of admission. Also, a statistically significant increase in weight was observed in 9 out of 11 patients who had been in the program for more than one month, with positive changes that were significantly associated with the program’s support. Consequently, these findings are consistent with those of Allard et al. (2015) and Correia & Waitzberg, who noted that a reduction in hospital stay length and improved recovery parameters are consequent to enhanced nutritional status.

6.0 Conclusion

This paper concludes that undernutrition remains one of the major challenges in the area of public health, with developing countries such as Rwanda being the most affected. The Kuzamura Ubuzima (KU) nutrition program has demonstrated significant potential in addressing this critical issue, particularly among hospitalized children. The study's findings reveal a clear positive correlation between participation in the KU program and improvements in nutritional status, as evidenced by gains in weight and improvements in weight-for-age and weight-for-height z-scores. This success underscores the importance of targeted nutritional interventions in healthcare settings, especially in regions where malnutrition is prevalent. The program's ability to benefit patients from lower socioeconomic backgrounds (ubudehe 3 or less) is particularly noteworthy, as it addresses a crucial aspect of health equity in Rwanda.

7.0 Recommendations

Basing on the presented findings and drown conclusion, the following recommendations were addressed:

- The Kuzamura Ubuzima program significantly improves nutritional outcomes and reduces in-hospital length of stay; thus, there is a need to expand the program to include more hospitals and other healthcare facilities within Rwanda.
- The training sessions should describe the importance of proper feeding, the key aspects of balanced diets, and their impact on the rate of recovery. This knowledge can assist the caregivers in making sound decisions on matters regarding the diet of their children other than when they are in the hospital.
- Policymakers should develop and come up with good policies that can encourage better provision of nutrition in pediatric healthcare.
- Hospital administrators should implement a comprehensive post-discharge follow-up system to monitor patients' nutritional status and provide continued support, preventing relapse into malnutrition.
- The Ministry of Health, in collaboration with the Ministry of Agriculture, should develop partnerships with local farmers and agricultural organizations to strengthen the supply chain of nutritious foods for the KU program, promoting sustainability and community involvement.
- Medical schools and nursing colleges should integrate nutrition education into the broader healthcare curriculum for medical professionals in Rwanda, emphasizing its importance in patient care and recovery.
- The Rwanda Biomedical Center should establish a national database to track the nutritional status of hospitalized children across Rwanda, facilitating research and informing evidence-based policy decisions.
- The KU program management team should create a mentorship program where experienced KU staff can guide and support the implementation of similar programs in other healthcare facilities, ensuring consistent quality and effectiveness across different settings.

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