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A CROSS-SECTIONAL STUDY ON THE IMPLEMENTATION OF RESULTS-BASED FINANCING TO IMPROVE MATERNAL, NEWBORN, AND CHILD HEALTH (MNCH) SERVICES IN NATIONAL REFERRAL HOSPITALS IN UGANDA

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ABSTRACT

Background

Results-based financing (RBF) is one of the health financing schemes implemented in Uganda's health care system to improve access and utilization of quality health services. This study evaluated the implementation of RBF for MNCH service delivery in national referral hospitals in Uganda.

Methods

The study employed a qualitative research approach and a cross-sectional research design with Kawempe National Referral Hospital as the study area. 12 participants were selected purposively from Kawempe National Referral Hospital, Ministry of Health Uganda, ENABEL-Belgian Development Agency, and Uganda Reproductive, Maternal and Child Health Services Improvement Project (URMCHIP). Data was collected through interviews and document reviews.

Results

The study reported that RBF increased resources used to purchase critical drugs and equipment, staff recruitment, and infrastructure development, as well as better indicators in MNCH service delivery. However, challenges such as inadequate supervision, fund misallocation, poor model design, and unclear fund management persisted. The study recommended enforcing supervision, revising resource allocation, and disbursing funds on time.

Conclusion

The implementation of RBF for MNCH service delivery in national referral hospitals in Uganda has improved MNCH outcomes as well as the quality of services provided. However, the existing challenges need to be addressed to ensure that the intended goals and objectives are achieved.

Keywords: *Uganda, Results-Based Financing, Maternal Health, Child Health, Health Services*
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Introduction

Results-based financing (RBF) reform implementation has emerged as vital for enhancing the coverage of health services, most especially in low-income countries. RBF is "an umbrella term used to describe any program in which a funder—often a national government or agency, or a foreign development partner—transfers money, material goods, or other incentives to a recipient agent conditional on the recipient achieving predefined output or outcome targets"[1]. It is "a cash payment or non-monetary transfer made to a national or sub-national government, manager, provider, payer or consumer of health services after attainment and verification of predefined results"[2]. In many countries, RBF was introduced to improve population health by promoting healthcare quality and outcomes[1,3]. For example, in the Democratic Republic of Congo (DRC), the implementation of RBF provided mechanisms for improving existing infrastructure, staffing, and equipment through resource provision[4]. Similarly, in Zimbabwe, the implementation of RBF provided a reasonable upfront investment for upgrading and repairing health facilities[4].

Some of the reported outcomes due to the implementation of RBF in health settings included a reduction in facility-based maternal mortality in Malawi due to the implementation of RBF[5]. RBF was also reported to be a very cost-effective intervention for strengthening MNCH service delivery in Zimbabwe[6]. These studies demonstrated that RBF implementation improved MNCH service delivery outcomes, particularly MNCH health service coverage and health care outcomes.

However, despite the notable progress registered in MNCH service delivery outcomes, the presence of limitations in the areas of implementation affects the impact of MNCH. One of the ways to ensure the sustainability of RBF is through domestic financing. Most LMICs are constrained financially and inject few resources into their healthcare systems. This

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implies that the success of RBF programs in most LMICs heavily relies on external financing, which is not sustainable[7]. The reliance on RBF funds coming from donors affects the health system's sustainability due to dependence on foreign countries. Another study analyzed different structures of RBF programs and concluded by saying those that mostly work is those with backing from the government[8]. This implies that integrating RBF into national health care systems influences its success compared to when RBF programs are designed for short-term interventions as independent schemes with little support from the state. Uganda adopted RBF as one of the health financing schemes to improve access and utilization of health services. In 2019, RBF was introduced in regional referral hospitals and one national referral hospital (Kawempe National Referral Hospital) to improve MNCH services. Kawempe National Referral Hospital specializes in maternal and neonatal services, and on average, it delivers 80-100 babies every day[9]. This roughly estimates 2,500 babies monthly or 30,000 babies annually[9]. The hospital admitted 14,869 women in labor, with over 4,000 requiring caesarean section in 2020[9]. This study applied the neo-institutional theory by John Meyer and Brain Rowan, which was developed in 1977 to evaluate the implementation of RBF for the improvement of MNCH services in Kawempe National Referral Hospital.

Methods

Study Design

This was a qualitative study that used a cross-sectional research design. This helped in collecting insights from participants at a single point in time. Utilizing a qualitative research approach helped in obtaining the thoughts and perceptions of what the participants had on the implementation of RBF in line with the objectives of the study.

Study Setting

The study was conducted between January to July 2024. Participants were from Kawempe National Referral Hospital, the Ministry of Health Uganda, and development partners from the ENABEL-Belgian Development Agency and the Uganda Reproductive, Maternal and Child Health Improvement Project (URMCHIP). Kawempe National Referral Hospital was selected because it is the only recipient of RBF for MNCH services among national referral hospitals in Uganda. The period studied was 2018-2023, which covers the transitional and implementation phases of RBF for MNCH services at Kawempe National Referral Hospital.

Study Population and Sampling

Participants were purposively selected. The sample was composed of 4 staff from Ministry of Health Uganda (Director Governance and Quality Assurance, the Director of Clinical Services, the Commissioner for Planning, and Assistant Commissioner of Reproductive & Infant Health), 5 staff from Kawempe National Referral Hospital (Nursing Officer, Assistant Nursing Officer in charge Midwifery, Enrolled Midwife, Principal Hospital Administrator and Focal Point person RBF), and 3 RBF Officers working with ENABEL and URMCHIP.

Data Collection

Face-to-face interviews and document reviews were used as the data collection methods. The face-to-face interviews were used primarily to get the opinions of the participants on the drivers, benefits, and challenges faced in the implementation of RBF for MNCH at Kawempe National Referral Hospitals. A structured interview guide was used. Document reviews involved the examination of both internal and external reports with information directly related to RBF at Kawempe National Referral Hospital. The quality of the data was enhanced by triangulation, which involved the integration and comparison of findings from the interviews and documents reviewed. Inconsistencies were highlighted and considered invalid where they could not be confirmed.

Ethical Approval

Ethical approval for this study was obtained from the Uganda Management Institute in Kampala, Uganda.

Ethics and consent

Participants were educated on the fundamental ethical principles for research. Written consent was obtained from each participant to show their acceptance to participate in the study.

Results

Impact of implementing RBF on MNCH service delivery in national referral hospitals in Uganda

Increase in resources

Participants shared that the implementation of RBF had increased supplies of drugs and equipment and the recruitment of human resources. RBF facilitated the procurement of equipment, reducing maternal and perinatal mortalities, increasing incentives to healthcare workers, and improving mother and childcare services. A participant shared that:

"The RBF money got was used to buy critical drugs which were not being provided by the government."

The health facility also received technical support and mentorship on how to manage RBF funds, thus building its capacity to deliver and benefit from the funds. It was further disclosed that some of the key issues that were assessed in the facility included MNCH service improvement and the

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utilization and quality of care for MNCH services. Other key issues included quality improvement, smartness of the facility, major documentation, human resource structure, infrastructure, and duty roster and information dissemination.

Improvement in the quality of healthcare services

A participant shared that due to the implementation of RBF at Kawempe National Referral Hospital, the following services had improved:

"Assessments of MNCH indicators, admissions, monitoring mothers for labor, recording arrival time, reducing on waiting time, monitoring cases of babies and obtaining critical medical supplies."

This was attributed to the increase in staff at the hospital who were motivated and readily available to provide health care services. In addition to that, maternal and neonatal mortality audits were frequently conducted, and the facility was in a good position to manage critical conditions. Participants shared that maternal audits were conducted immediately or daily, while perinatal audits were conducted every week. The beneficiaries of the program included staff, mothers, babies, and the hospital itself. Therefore, the implementation of RBF directly promotes good service delivery at Kawempe National Referral Hospital.

Improved performance and service utilization

Performance reports for MNCH service utilization at Kawempe National Referral Hospital were reviewed for the years 2019-2022 to determine whether RBF influenced MNCH performance before 2019 and after its implementation. The findings showed that key MNCH indicators improved. The MNCH indicators covered in the report included Out Patient Department (OPD) new attendance, OPD re-attendance, Antenatal Care (ANC) first visit for women, Deliveries in the unit, Caesarian sections, Referrals to ANC units and Babies who received PNC at 6 hours.

The table below shows an extract of the performance of Kawempe National Referral Hospital in July 2019 (before the implementation of RBF), July 2020 (after the implementation of RBF), July 2021 (after the implementation of RBF) and July 2022 (after the implementation of RBF). The indicators selected are deliveries in the unit, caesarian sections, and babies who received PNC at 6 hours.

Table 1: Extract of the performance of Kawempe National Referral Hospital before and after the implementation of RBF

MNCH indicator	Deliveries in unit	Caesarian section	Babies who received PNC at 6 hours
July 2019	1,873	652	1873
July 2020	103,141	12,917	96,196
July 2021	117,622	14,253	109,756
July 2022	124,170	15,188	119,548

Source: Kawempe National Referral Hospital Performance Report (2019-2022)

As seen above, before the implementation of RBF in 2019, MNCH service utilization at Kawempe National Referral Hospital was low for the selected indicators above. However, with the implementation of RBF in 2020, MNCH service utilization at the facility increased exponentially. Therefore, the implementation of RBF led to increased service utilization at Kawempe National Referral Hospital.

Improved perception about Health services offered

The perceptions of the different implementers of RBF were obtained from the interviewees. All the interviewees agreed that RBF had made a difference in MNCH service delivery. One participant shared that:

> *"RBF has increased quality in the health sector and improved the readiness of facilities to offer services, e.g., purchase of machines, organized labor suits and essential drugs."*

The above participant stressed how RBF had improved service quality in the health sector due to improved readiness of facilities to provide health services. Another participant revealed that:

> *"RBF has facilitated facilities to purchase supplies where there is shortage, improve quality, implement improvement projects, conduct trainings, offer timely services and conduct notifications and reviews easily."*

According to the 2021 Annual Health Sector Report by the Ministry of Health Uganda, RBF is part of the reforms prioritized in the Health Financing Strategies 2014/15-2024/25 aimed at making the government's purchasing of health services more strategic. The report shares that RBF was adopted in the health sector in 2016. It was scaled up under URMCHIP in 2018/19. RBF was implemented in the entire country by April 2020. Over the years, there have been different partners supporting the implementation of RBF, such as the World Bank, ENABEL, Global Financing Facility (GFF), and Swedish International Development

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Cooperation Agency (SIDA). The different implementers, including the Government of Uganda, consider RBF as a key policy intervention aimed at improving health financing in the country.

Challenges faced in the implementation of RBF for MNCH service delivery in national referral hospitals in Uganda

In the findings, different challenges were shared. These ranged from poor supervision, misallocation of resources, delayed disbursement of funds, among others. The challenges faced are discussed below.

Administrative challenges

It was discovered that there were few RBF staff, which made supervising the program difficult. Due to this challenge, some services were being prioritized over others. There were also cases where poor-performing health facilities received funds that were more compared than good-performing health facilities. This was in disagreement with the principle premise of RBF being tied to results and not inputs. A participant mentioned that:

> *"Supervisors from the center are few, and this affects service delivery as verification of the reports takes a long and the funds reach the beneficiaries very late."*

Every region of the country was allocated one supervisor to carry out the orientation of the program, help facilities come up with work plans, and verify the data in order to qualify to get the funds. This would take a long time for one person to carry out verification and hence a challenge to the success of the program.

Non-compliance to the funding guidelines

It was reported that benefitting health facilities sometimes invested in things that were not a priority. This jeopardized the effectiveness of the funds received from RBF as they were not directly linked to key areas that would result in better results concerning MNCH services. A participant disclosed that:

> *"For example, the funds would be spent on fuel and having meals instead of it being used for the actual improvement of the facility."*

Failure to spend on the critical areas of the service delivery affects much of the outcomes of the RBF reform. There is need for strict adherence to the critical areas.

Delayed disbursement of funds

It was also reported that it took long for RBF funds to be released. This affected the strategic purchasing of key items and also resulted in delayed payment of incentives, affecting staff productivity. Bureaucracy was attributed to the delayed disbursement of funds. Due to the delays, health service delivery was affected as strategic purchasing could not effectively be carried out. A participant revealed that:

> *"Because of bureaucracy from the funders, sometimes money does not come on time. Yet on our side, we will have obtained the targets that they gave us for them to fund us. This makes us demotivated and loses morale for other activities that are funded through RBF."*

The verification exercise takes a long period. This is affected by having one supervisor who has to verify the data from all the facilities benefiting from the program. This consumes a lot of time before facilities are cleared for payments.

Inadequate and unclear management of funds

The management of RBF funds was reported to be unclear. This was coupled with inadequate funds, which made their utilization difficult. A participant shared that:

> *"Every staff wants to benefit from the fund, and yet it is inadequate and does benefit all the departments. This de-motivates others who do not benefit."*

It was thus seen that the inadequate funds resulted in low levels of motivation among staff who had hopes of benefitting from the fund but do not belong to the departments that benefitted from RBF. There is a need to roll out the program to all departments since it has benefited the MNCH section.

Design challenges

It was reported that the RBF model was based on supply, not demand. Therefore, it was not a solution that was implemented out of a community need. This has created gaps in its efficiency since some areas are not catered for. Additionally, the uptake of some health services by numbers does not correspond. A participant asserted that:

> *"There are loopholes in its implementation, monitoring, and evaluation."*

There is a need to change the program to suit the community's demands as compared to what the guidelines state.

Low awareness levels

Some staff do not understand the program, and this makes it hard to get the improved quality services which was meant for the program. A participant revealed that:

> *"New hospital staff are not oriented once recruited. This affects their performance since they do not understand the program altogether."*

There is a need for continuous training of the officers about what RBF is all about. This would help the new staff to learn the core objectives of what they are implementing.

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Non-compliance to guidelines by RBF Focal Point persons

Sometimes, the allowances failed to reach health staff. This de-motivated them from providing the needed services. A participant shared that:

Some respondents had this to say:

> *"Some RBF focal point managers cheat health staff by not giving them what is due to them, and this affects the morale of the workers."*

There is a need to pay health workers on their own account instead of giving them allowances through the RBF focal point person. The guidelines should be reviewed so that the funds are given directly to health staff and not passing through other officers.

Discussion

Impact of implementing RBF on MNCH service delivery in national referral hospitals in Uganda

It was shared that RBF implementation resulted in increased drug, equipment, and human resource supply. This increase in resources supported the hospital facility to improve MNCH services. Participants confirmed that MNCH service delivery had improved, which was attested by improvement in MNCH indicators. This confirms what a study says, that the implementation of RBF provides health implementers with an opportunity to scale the impact of their services since it draws emphasis on key health results[1]. Thus, health facilities are influenced to provide health services more effectively. The study showed that RBF was contributing positively to MNCH service delivery. RBF has been reported to facilitate improved access to medical supplies and services in health facilities, most especially in MNCH interventions[8]. Health facilities are also able to fill workforce gaps to improve service provision. RBF funds are structured to cater to incentives and direct services; however, as long as health facilities are following the structure, they can utilize them in ways they deem fit for them[1]. Therefore, the funds are spent based on context and priorities at the facilities.

Results-based financing has created more resources that healthcare workers require and made possible more healthcare worker staffing and infrastructure expansion together with drug and medical equipment improvements. Healthcare services delivered a substantial advancement through enhanced birth monitoring systems and improved records management alongside a decline in maternal and childbirth deaths. Implementation of RBF has driven substantial growth in service utilization because delivery numbers, along with c-sections and postnatal care appointments, have increased steeply. Staff members and patients now report improved healthcare service quality, which includes prompt medical responses together with enhanced readiness of facilities and better service delivery.

The examination findings illustrate the advantages and limitations that RBF creates for national referral hospitals as specified in the research objectives.

The research results confirm earlier international studies that have investigated the success of RBF systems within healthcare sectors. The enhancement of resources alongside increased service delivery at Kawempe National Referral Hospital showed similar patterns to the findings in the Democratic Republic of Congo[4]. Research carried out in Zimbabwe demonstrated that RBF operates as a financially efficient mechanism to enhance MNCH service quality[6]. The research showed a better healthcare quality coupled with decreased maternal and perinatal deaths after RBF implementation both at Kawempe National Referral Hospital and in the research conducted in Malawi[8]. It was documented how RBF brought better operational speed and service quality to healthcare facilities in Zambia[1].

Despite its benefits, challenges were faced in its implementation. For example, it was noted that the delayed disbursement of RBF funds has affected key health indicators as staff and health facilities are less motivated[1,5]. In addition, they are restricted from purchasing critical drugs or equipment when they are needed, thus affecting their performance. Challenges with the RBF design have also made the verification of results difficult, limiting its effectiveness[2]. Studies about RBF fund delays have also emerged from Malawi and Congo due to inefficient bureaucracy, which prevented timely fund allocation[5]. RBF programs in low- and middle-income countries face sustainability issues because they must depend on donor funding[7]. The research highlights that RBF strengthens MNCH service delivery, yet its operational achievements remain limited because of organizational issues and money management problems. Therefore, to improve its effectiveness, these challenges have to be resolved.

The research on Kawempe National Referral Hospital provides important conclusions about medical settings in Uganda and similar low-income health systems. The national scope of RBF enables us to predict that the enhancement of service quality, together with improved available resources, exists throughout all referral hospitals throughout Uganda. Financial oversight and management efficiency levels in other institutions can result in dissimilar effects despite the program. Results from this research correspond with existing findings from Zimbabwe, Malawi, and Congo about how RBF delivers comparable effects on maternal newborn care services across various resource-limited situations. The limited generalization of research results occurs because the hospital remains the only study location. Healthcare implementation strategies alongside governance structures and political stability factors could affect RBF program results in various hospitals. The extensive dependency on donor funding for RBF creates sustainability challenges because health financing in weak domestic healthcare settings remains unstable.

Research data shows that RBF plays an essential role in Ugandan health care by increasing resources and the quality of services while boosting service use. Despite its usefulness, RBF encounters problems caused by incorrect fund allocations, together with inadequate supervision and slow payments, which reduce its effectiveness. The study maintains alignment with worldwide research describing RBF healthcare financing approaches while presenting both favorable and unfavorable aspects. The success of RBF programs depends heavily on solving existing financial management issues and establishing stronger domestic funding along with improved monitoring systems.

Conclusion

The study evaluated the implementation of RBF for MNCH service delivery in national referral hospitals in Uganda, using Kawempe National Referral Hospital as a case study. The findings revealed that RBF was improving health service delivery, facilitated more staff recruitment, provided incentives to staff, and facilitated the purchase of critical items such as essential drugs and machines. This resulted in the improvement of health service quality and readiness to provide health services. However, there were also challenges, such as poor supervision, misallocation of resources, and delayed disbursement of funds which were faced. These challenges were hindering the efficacy of RBF as a health financing model in Uganda since they made strategic purchasing and payment of incentives difficult. As a result, health facilities remained constrained, affecting health service provision and its quality. This study recommends enforcing supervision to increase compliance among health workers, revising resource allocation to ensure that key priority areas are funded, and disbursing funds on time to ensure smooth delivery of services.

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