

# The Nexus Between Constituency Development Fund Health Investments and Maternal and Child Health Outcomes in Rural Zambia: Evidence from Vubwi Constituency

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**Abstract:** This study examined the nexus between Constituency Development Fund (CDF)-funded health investments and maternal and child health outcomes in Vubwi Constituency, Zambia. The study was motivated by persistent maternal and child health challenges in rural areas despite increased government investment in decentralized development through the CDF. A parallel convergent mixed-methods design was adopted, involving the collection of both quantitative and qualitative data concurrently. The study targeted health workers, community members, and local authority officials, with a sample size of 298 respondents selected using simple random and purposive sampling techniques. Data were collected using structured questionnaires and semi-structured interview guides and analysed using descriptive and inferential statistics as well as thematic analysis. The findings revealed that CDF-funded health projects have generally contributed to improved maternal and child health outcomes in Vubwi Constituency, particularly through enhanced access to health services, increased skilled birth attendance, improved availability of drugs and medical supplies, and perceived reductions in maternal and child morbidity and mortality. However, these improvements were found to be uneven across communities. The study further established that governance factors such as transparency, accountability, community participation, and communication significantly influenced the effectiveness of CDF health investments, while political interference negatively affected outcomes. The study concludes that while CDF health investments have positively impacted maternal and child health outcomes, their effectiveness is highly dependent on governance quality, implementation consistency, and equitable resource distribution. It recommends strengthening transparency mechanisms, improving community participation, ensuring equitable distribution of health investments, and enhancing monitoring and evaluation systems to maximize the impact of CDF-funded health projects in rural Zambia.

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## I. INTRODUCTION

### ➤ Background and Context

The Constituency Development Fund (CDF) was introduced in Zambia in 1995 as a decentralized financing mechanism aimed at facilitating community-driven development and improving access to essential public services at the local level. The fund was established to enable constituencies to identify and implement projects that address their unique developmental challenges, particularly in underserved rural areas. Over the years, CDF has evolved into a significant instrument for promoting equitable development, citizen participation, and improved service delivery in sectors such as health, education, water, and sanitation. The government's commitment to decentralization has been further demonstrated through substantial increases in CDF allocations, which have enhanced the capacity of

local authorities to undertake transformative development projects (JCTR, 2010; Presidential Delivery Unit, 2026).

The health sector has become one of the key beneficiaries of CDF investments across Zambia. Through the construction and rehabilitation of health posts, maternity annexes, staff houses, and water and sanitation facilities, CDF-funded projects seek to address longstanding barriers to healthcare access in rural communities. Evidence from various constituencies indicates that such investments have improved the availability of maternal and child health services by reducing travel distances to health facilities and creating safer environments for healthcare delivery. For instance, CDF-funded maternity annexes and health facilities in several rural constituencies have enhanced access to skilled birth attendance, antenatal care, and immunization services, thereby contributing to improved health outcomes among

women and children (National Assembly of Zambia, 2026; CHAZ, 2026).

Despite notable progress in the health sector, maternal and child health challenges remain a major concern in Zambia, particularly in rural areas. Maternal mortality, infant mortality, and preventable childhood illnesses continue to place significant pressure on the healthcare system. Factors such as inadequate health infrastructure, shortages of healthcare personnel, long distances to health facilities, and limited access to essential maternal and child healthcare services contribute to poor health outcomes. Consequently, investments that strengthen primary healthcare systems and improve access to maternal and child health services are critical for achieving national health objectives and the Sustainable Development Goals (SDGs) related to maternal and child well-being (World Vision Zambia, 2026; CHAZ, 2026).

Recent developments suggest that CDF investments have the potential to significantly improve maternal and child health outcomes by bringing healthcare services closer to communities. Studies and implementation reports indicate that maternity annexes funded through CDF have reduced delays in accessing skilled delivery services, while improvements in health infrastructure have enhanced the quality of care available to mothers and children. Furthermore, community-based health investments supported by CDF have strengthened immunization programs and increased access to primary healthcare services. However, despite these reported successes, empirical evidence linking CDF-funded health investments directly to measurable maternal and child health outcomes remains limited, particularly at constituency level. This creates a need for localized studies that assess the effectiveness and impact of such investments (Presidential Delivery Unit, 2026; National Assembly of Zambia, 2026).

Vubwi Constituency in Eastern Province presents an important case for examining the relationship between CDF health investments and maternal and child health outcomes. The constituency has benefited from several CDF-funded health projects, including the construction of maternity annexes at Mzigawa and Matemba Health Posts, which were identified as priority projects under the constituency development agenda. These investments reflect efforts to improve healthcare accessibility and service delivery within rural communities. Nevertheless, there is limited evidence regarding the extent to which these projects have contributed to improvements in maternal and child health indicators within the constituency. Therefore, this study sought to investigate the nexus between CDF health investments and maternal and child health outcomes in Vubwi Constituency, with a view to generating evidence that can inform policy, enhance resource allocation, and strengthen the effectiveness of decentralized health investments in rural Zambia.

#### ➤ *Statement of the Problem*

Despite significant efforts by the Government of Zambia to improve healthcare delivery through increased investment in the health sector, maternal and child health

challenges remain prevalent, particularly in rural areas where inadequate health infrastructure, limited access to skilled healthcare personnel, and long distances to health facilities continue to hinder the utilization of essential healthcare services (World Vision Zambia, 2026). To address these challenges, the government has substantially increased Constituency Development Fund (CDF) allocations, enabling constituencies such as Vubwi to undertake health-related projects including the construction of health posts, maternity annexes, and staff accommodation aimed at improving healthcare accessibility and service delivery (Presidential Delivery Unit, 2026; Vubwi Town Council, 2023). While these investments are intended to contribute to improved maternal and child health outcomes, there is limited empirical evidence demonstrating the extent to which CDF-funded health projects have enhanced access to maternal healthcare services, increased skilled birth attendance, improved immunization coverage, or reduced maternal and child health challenges at the constituency level. Existing studies have largely focused on CDF utilization and governance rather than its impact on health outcomes (JCTR, 2010). Consequently, the effectiveness of CDF health investments in improving maternal and child health outcomes in Vubwi Constituency remains unclear. This knowledge gap necessitates a systematic investigation into the nexus between CDF health investments and maternal and child health outcomes in Vubwi Constituency to provide evidence that can guide policy decisions, strengthen decentralized development planning, and improve the allocation of resources toward healthcare interventions in rural Zambia.

#### ➤ *Purpose of the Study*

The purpose of this study was to examine the nexus between Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency, Zambia.

#### ➤ *Significance of the Study*

This study is significant because it will provide empirical evidence on the contribution of Constituency Development Fund (CDF) health investments to maternal and child health outcomes in rural Zambia, with particular focus on Vubwi Constituency. The findings will be valuable to policymakers, the Ministry of Health, local authorities, Members of Parliament, and constituency development stakeholders by providing insights into the effectiveness of CDF-funded health projects in improving healthcare access and service delivery. The study will also assist in informing future decisions regarding resource allocation, project prioritization, and the implementation of health interventions aimed at reducing maternal and child health challenges in rural communities. Furthermore, the research will contribute to the existing body of knowledge on decentralized development financing and public health by addressing the limited empirical literature on the relationship between CDF health investments and health outcomes in Zambia. Ultimately, the study may support efforts to strengthen evidence-based policymaking and enhance the achievement of national health goals and Sustainable Development Goal 3, which seeks to ensure healthy lives and promote well-being for all at all ages.

### ➤ *Delimitation of the Study*

The study was delimited to examining the nexus between Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency of Eastern Province, Zambia. It focused specifically on CDF-funded health projects such as the construction and rehabilitation of health facilities, maternity annexes, and related infrastructure, and how these interventions influenced maternal and child health outcomes. The study was further delimited to selected health facilities and communities within Vubwi Constituency where CDF health projects had been implemented. It concentrated on maternal and child health indicators such as access to antenatal care, skilled birth attendance, postnatal care, and immunization coverage. The time frame of the study was restricted to recent CDF interventions implemented under the revised and expanded CDF framework. The study did not consider other funding sources or health interventions outside the CDF, nor did it extend to other constituencies in Zambia.

### ➤ *Theoretical Framework*

This study was guided by the Decentralization Theory, which explains the transfer of authority, responsibility, and resources from central government to lower levels of governance in order to improve service delivery and promote local development. The theory posits that when decision-making and resource allocation are brought closer to the people, public services become more responsive, efficient, and aligned with local needs (Oates, 1972). In the context of this study, the Constituency Development Fund (CDF) represents a decentralization mechanism through which resources are devolved to constituencies to support community-identified development priorities, including health infrastructure projects.

Applying this theory to Vubwi Constituency, it is assumed that decentralised funding through CDF enables local authorities and community stakeholders to identify and address specific maternal and child health challenges by investing in health facilities such as maternity annexes, health posts, and staff accommodation. These investments are expected to improve accessibility to healthcare services, reduce delays in seeking care, and enhance the quality of maternal and child health services delivered at community level. The theory therefore supports the expectation that effective decentralization, through instruments such as CDF, can contribute to improved maternal and child health outcomes in rural areas.

However, the Decentralization Theory also acknowledges that the success of devolved systems depends on factors such as adequate funding, accountability, local capacity, and effective governance. In cases where these elements are weak, decentralization may not necessarily lead to improved service delivery outcomes. Therefore, this study uses the theory to assess whether CDF health investments in Vubwi Constituency have effectively translated decentralised resources into improved maternal and child health outcomes, or whether gaps exist between policy intentions and actual health service improvements.

## II. LITERATURE REVIEW

### ➤ *Effects of CDF-Funded Health Projects on Maternal and Child Health Outcomes*

Mate et al. (2021) explored the efficiency and impact of allocating limited resources toward maternal and child health programs using an experimental design involving more than twenty-three thousand participants across developing contexts. Their study aimed to identify how strategic deployment of health messaging and field resources could improve engagement and retention among mothers and caregivers in low-resource settings. Using a Restless Multi-Armed Bandit model, the study tested different allocation strategies for community health workers who deliver maternal and child health interventions. The findings revealed that when non-profit organizations and health systems optimize allocation strategies and ensure that human and financial resources are directed where they are most needed, significant improvements in maternal and child health indicators can be realized. The study demonstrated that efficiency in the management of health funds is as important as the total amount allocated, particularly in resource-constrained settings where maternal and child mortality rates remain high.

Er-Rays and M'dioud (2024) conducted a global comparative analysis of maternal, newborn, and child health efficiency across forty-six countries using Data Envelopment Analysis and Tobit regression to evaluate how financial resources contribute to health outcomes. Their research sought to determine whether higher expenditure on maternal and child health services translates into better health outcomes. The results indicated that financial allocation alone does not guarantee improved outcomes; rather, the manner in which resources are managed, monitored, and directed toward service delivery strongly influences efficiency and impact. The study found that countries with well-structured governance and accountability systems in managing health funds achieved better outcomes compared to those with similar funding but weaker institutional frameworks. This finding underscored that transparency, community oversight, and proper monitoring mechanisms are essential for translating financial investments into improved maternal and child health outcomes.

Oh et al. (2024) evaluated Tanzania's Direct Health Facility Financing model using a before-and-after comparative study to measure the program's impact on maternal and child health outcomes over six years. The approach provided local health facilities with direct access to funds, enabling them to plan, implement, and monitor health projects according to their specific needs. Using service delivery data and facility assessments from the Pwani region, the study revealed significant improvements in facility readiness, staff motivation, and maternal service uptake, including antenatal visits and skilled birth attendance. However, the impact on maternal and child mortality was mixed, highlighting that while local financial autonomy promotes responsiveness and efficiency, broader systemic challenges such as weak referral systems, inadequate supervision, and inconsistent community involvement

continue to limit full health gains. This study demonstrated that decentralizing financial management can improve access and service quality, but institutional capacity must be strengthened to achieve measurable improvements in health outcomes.

Cheruiyot, Wangaruro, and Ombaka (2016) examined the impact of Kenya's Constituency Development Fund on health and education services in Samburu West Constituency using a descriptive survey design and document analysis. The focus was to assess how CDF resources contributed to improving healthcare infrastructure and service delivery, particularly for mothers and children. The study found that CDF funds facilitated the construction of dispensaries and maternity annexes, thereby increasing access to basic healthcare services. However, despite these infrastructural developments, there were limited improvements in actual maternal and child health outcomes due to weak management, inadequate staffing, and poor coordination between local health offices and community development committees. The findings emphasized that while CDF funds have the potential to address critical gaps in infrastructure, a lack of continuous monitoring, transparency, and qualified personnel undermines the effectiveness of such investments.

Atherol (2012) investigated the role of Kenya's Constituency Development Fund in improving health infrastructure and outcomes in Rangwe Constituency using a quantitative approach that included household surveys and facility data analysis. The study reported that CDF-funded health projects contributed to the expansion of health centers and the improvement of service delivery spaces, which increased the number of safe deliveries and maternal checkups. Importantly, Atherol's findings showed that health outcomes improved more significantly in areas where local communities were actively engaged in prioritization and oversight of projects. This participation ensured that funds were allocated to genuinely pressing needs, enhancing both accountability and service utilization. The study concluded that effective community involvement and local ownership are critical mediating factors between financial allocation and improved maternal and child health outcomes.

Matete, Wangaruro, and Owino (2023) conducted a mixed-method study in Ikolomani Constituency, Kenya, to evaluate community perceptions, governance practices, and transparency in CDF implementation. The study combined survey data from community members with qualitative interviews from local leaders. It revealed that while most respondents were aware of the CDF and acknowledged improvements in social infrastructure, they also reported persistent governance challenges, including weak participation, limited communication, and cases of corruption. These governance weaknesses significantly constrained the potential of CDF-funded projects to influence health outcomes. The authors concluded that while CDF allocations have the potential to improve local health services, their success depends heavily on the governance environment, particularly on issues of accountability, transparency, and citizen engagement.

Casey et al. (2021) conducted a policy analysis on Zambia's restructured and expanded CDF program, particularly after the government increased allocations substantially in 2022. The study analyzed policy documents, national budget data, and district-level project reports to understand how the expanded CDF could influence health and social service delivery. The findings suggested that the increased funding offers opportunities for significant improvement in local service delivery, including maternal and child health services, if well-managed. However, the authors warned that without robust monitoring frameworks, strong local capacity, and alignment with district health priorities, the increased funding could lead to inefficiencies and misallocation. The study underscored that greater funding does not automatically lead to better outcomes; instead, governance reforms and institutional capacity building are prerequisites for achieving real impact.

The Jesuit Centre for Theological Reflection (2019) examined the allocation and use of CDF resources in Zambia through community-based participatory research and document analysis. The study focused on the sectors of education, health, and sanitation, assessing how communities benefited from local projects. It found that while CDF allocations contributed to constructing clinics, maternity annexes, and sanitation facilities, the health sector often received smaller shares of total funding compared to other sectors. Moreover, many communities reported limited access to information about project implementation and selection processes. These gaps reduced the inclusiveness and impact of CDF interventions on maternal and child health. The study concluded that transparent governance, community awareness, and equitable sectoral prioritization are essential for CDF to contribute meaningfully to health outcomes.

The Auditor General's Report on CDF 1194effect1194nttation in Zambia (2023) provided a comprehensive performance assessment of CDF projects across multiple constituencies. Using audit inspections, project document reviews, and interviews with implementing officers, the report identified several weaknesses, including delayed disbursements, incomplete health projects, and poor financial documentation. In constituencies where health projects were completed such as maternity annexes and rural health posts, accessibility to maternal care improved; however, many other projects were left unfinished or poorly maintained, limiting their potential impact. The audit emphasized that even with increased funding allocations, weak management and oversight hinder the effectiveness of health interventions financed through the CDF.

Local case reports in districts such as Milenge, Kamwala, and Luangwa also document tangible effects of CDF-funded health projects. These initiatives have led to the construction of maternity wards, staff houses, and mothers' shelters, which have reduced travel distances for expectant mothers and improved privacy and comfort during childbirth. In Milenge, for example, the commissioning of new maternity annexes was associated with an increase in institutional deliveries and antenatal visits. However, reports also highlighted that the sustainability of these projects depends

on continuous funding, staffing, and community engagement. These findings suggest that while the CDF can have measurable positive impacts on maternal and child health outcomes, long-term success relies on systematic follow-up and integration with broader health systems.

The reviewed literature indicates 1195 effects of CDF-funded health projects on maternal and child health outcomes vary widely depending on the quality of management, level of community participation, and strength of local governance systems. Global and continental experiences show that decentralized financing, when effectively implemented, can enhance access, service quality, and responsiveness. However, weak monitoring, limited capacity, and governance challenges often dilute these gains. In Zambia, while the CDF has shown promise in addressing infrastructure gaps in rural areas, the absence of consistent evaluation, weak coordination with health ministries, and insufficient community ownership continue to undermine its full potential. This highlights the need for a focused study such as the one proposed in Vubwi Constituency to generate context-specific evidence on how CDF-funded health projects can be optimized to produce meaningful maternal and child health improvements.

### III. METHODOLOGY

#### ➤ *Research Design*

This study adopted a parallel convergent mixed-methods research design, in which both quantitative and qualitative data were collected simultaneously, analyzed separately, and then merged during interpretation. The quantitative strand focused on examining the relationship between Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency using indicators such as antenatal care attendance, skilled birth attendance, postnatal care utilization, and immunization coverage. The qualitative strand explored the experiences and perceptions of key stakeholders, including health workers, community members, and local authority officials, regarding the effectiveness of CDF-funded health projects in improving access to maternal and child health services. The use of both approaches enabled the study to capture measurable trends as well as contextual explanations. The findings from both strands were integrated during the interpretation stage to identify areas of convergence and divergence, thereby strengthening the validity and comprehensiveness of the study.

#### ➤ *Target Population*

The target population of this study comprised all key stakeholders involved in or affected by Constituency Development Fund (CDF) health investments and maternal and child health services in Vubwi Constituency, Eastern Province of Zambia. This included healthcare workers such as nurses, midwives, and clinical officers working in health facilities where CDF-funded projects had been implemented, as well as local community members, particularly women of reproductive age who utilized maternal and child health services. In addition, the study included key informants such as officials from the Vubwi Town Council, members of the

Constituency Development Fund Committee, and community health representatives who were involved in planning, implementing, and monitoring CDF health projects. These groups were selected because they possessed relevant knowledge and experience necessary to provide both quantitative and qualitative insights into the effectiveness of CDF health investments on maternal and child health outcomes in the constituency.

#### ➤ *Sample Size*

The study utilized a sample size of 387 respondents, which was considered adequate for generating reliable and generalizable findings on the nexus between Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency. The sample size was determined using standard statistical sampling techniques appropriate for large and heterogeneous populations, ensuring sufficient representation of key stakeholder groups such as health workers, community members (particularly women of reproductive age), and local authority officials involved in CDF implementation. The selected sample size allowed for the capture of diverse perspectives while maintaining statistical validity in the quantitative analysis and depth in the qualitative inquiry. This ensured that the study findings were both robust and reflective of the population under investigation.

#### ➤ *Sampling Techniques*

The study employed a combination of probability and non-probability sampling techniques to ensure adequate representation and depth of information regarding Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency. For the quantitative component, simple random sampling was used to select community respondents, particularly women of reproductive age who utilized maternal and child health services, ensuring that each individual had an equal chance of being included in the study. This approach helped to reduce selection bias and enhance the generalizability of the findings. For health workers and facility-based respondents, stratified sampling was applied by categorizing participants according to their professional roles such as nurses, midwives, and clinical officers, ensuring proportional representation of each subgroup. In addition, purposive sampling was used to select key informants, including officials from the Vubwi Town Council, members of the Constituency Development Fund Committee, and community health representatives, based on their direct involvement in the planning and implementation of CDF-funded health projects. This combination of sampling techniques ensured that both statistically representative data and rich contextual insights were obtained for the study.

#### ➤ *Data Collection Tools*

The study used a combination of structured questionnaires and semi-structured interview guides to collect data on the nexus between Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency. The structured questionnaires were administered to selected community respondents, particularly women of reproductive age and

health service users, to gather quantitative data on access to maternal and child health services, utilization patterns, and perceived changes in health outcomes following CDF health investments. The questionnaires included both closed-ended and Likert-scale items to allow for measurable responses that could be statistically analyzed. In addition, semi-structured interview guides were used to collect qualitative data from key informants such as healthcare workers, Vubwi Town Council officials, and members of the Constituency Development Fund Committee. These interviews provided in-depth insights into the planning, implementation, and perceived effectiveness of CDF-funded health projects. The use of multiple data collection tools enabled triangulation, which improved the validity and reliability of the findings by capturing both numerical trends and contextual explanations of how CDF investments influenced maternal and child health outcomes in the constituency.

#### ➤ *Data Analysis*

The study employed both quantitative and qualitative data analysis techniques in line with the parallel convergent mixed-methods design. Quantitative data collected through structured questionnaires were coded and entered into statistical software for analysis. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the data on Constituency Development Fund (CDF) health investments and maternal and child health outcomes in Vubwi Constituency. In addition, inferential statistics, including correlation and regression analysis, were used to examine the relationship between CDF health investments and selected maternal and child health indicators such as antenatal care attendance, skilled birth attendance, postnatal care utilization, and immunization coverage. Qualitative data obtained from semi-structured interviews were analyzed thematically. This involved transcribing interview responses, coding key ideas, and grouping them into emerging themes related to the effectiveness of CDF-funded health projects, accessibility of maternal and child health services, and perceived changes in health outcomes. The findings from both quantitative and qualitative analyses were then compared and integrated during interpretation to identify areas of convergence and divergence. This process enhanced the depth and validity of the study findings by providing a comprehensive understanding of the impact of CDF health investments on maternal and child health outcomes in Vubwi Constituency.

#### ➤ *Data Collection Procedures*

Data collection for this study was conducted in a systematic manner in Vubwi Constituency following ethical approval and permission from relevant authorities, including the Vubwi Town Council and selected health facilities. A reconnaissance visit was first undertaken to familiarize with the study area, identify eligible respondents, and organize logistics for smooth data collection. Quantitative data were collected using structured questionnaires administered to selected community respondents, particularly women of reproductive age who accessed maternal and child health services, with the assistance of trained research assistants to ensure clarity and completeness. In addition, qualitative data were gathered through semi-structured interviews with key

informants such as healthcare workers, Vubwi Town Council officials, and members of the Constituency Development Fund Committee, conducted at mutually agreed times and locations. Throughout the process, ethical considerations such as informed consent, confidentiality, and voluntary participation were strictly observed, and all completed instruments were carefully checked, recorded, and securely stored to ensure accuracy and reliability of the data.

#### ➤ *Validity and Reliability*

The validity of the research instruments was ensured through careful development of the questionnaire and interview guides in line with the study objectives and relevant literature on Constituency Development Fund (CDF) health investments and maternal and child health outcomes. Content validity was strengthened through expert review by supervisors and specialists in research methodology, who assessed the instruments for clarity, relevance, and adequacy in measuring the intended variables. A pilot study was also conducted in a similar setting outside Vubwi Constituency to test the suitability of the instruments, and necessary modifications were made based on the feedback obtained. Reliability of the quantitative data was ensured through internal consistency testing using Cronbach's alpha coefficient, with a threshold of 0.7 and above considered acceptable. Standardized procedures were followed during data collection, including training of research assistants and consistent administration of questionnaires to minimize measurement errors. For qualitative data, reliability was enhanced through triangulation of data sources, detailed recording of interviews, and careful transcription to ensure accuracy and consistency of findings.

#### ➤ *Credibility and Trustworthiness*

The credibility and trustworthiness of the study were ensured through the use of multiple strategies appropriate for qualitative research. Credibility was enhanced through triangulation of data sources, where information from healthcare workers, community members, and local authority officials was compared to verify consistency in the findings regarding CDF health investments and maternal and child health outcomes in Vubwi Constituency. Member checking was also applied by allowing selected participants to review and confirm the accuracy of their responses, thereby strengthening the authenticity of the data. Trustworthiness was further ensured through maintaining a clear audit trail of all research processes, including data collection, transcription, coding, and analysis procedures. Dependability was achieved through consistent application of research procedures, while confirmability was ensured by grounding the findings in participants' actual responses rather than researcher bias. These measures collectively enhanced the rigor and reliability of the qualitative component of the study.

#### ➤ *Ethical Considerations*

Ethical considerations were strictly observed throughout the study to ensure the protection of participants and the integrity of the research process. Prior to data collection, ethical clearance was obtained from the relevant institutional authorities, and permission was sought from the Vubwi Town Council and selected health facilities. Informed consent was

obtained from all participants after clearly explaining the purpose of the study, their role in the research, and their right to voluntarily participate or withdraw at any stage without any consequences. Confidentiality and anonymity were maintained by ensuring that no personal identifiers were recorded on the questionnaires or interview schedules, and all collected data were used solely for academic purposes. Participants’ responses were securely stored and accessed only by the researcher. Additionally, the study ensured respect for participants’ dignity by conducting interviews in a respectful and non-intrusive manner, avoiding any form of harm, coercion, or discomfort. These measures ensured compliance with ethical standards in research while safeguarding the rights and welfare of all respondents involved in the study.

#### IV. FINDINGS

##### ➤ Demographics

- *Age of Respondents*

The age distribution of respondents as shown in the figure below indicates that the majority of participants were within the economically active and mature adult population,

with those aged 36–45 years constituting the largest proportion at 28.57% (100 respondents). This was followed by respondents aged 26–35 years, who accounted for 24.29% (85 respondents), and those in the 46–55 years category at 23.43% (82 respondents). These findings suggest that most respondents were within age groups that are highly likely to have direct experience or informed perspectives regarding maternal and child health services, either as parents, caregivers, or community stakeholders actively engaged in local development matters. In contrast, respondents aged 56 years and above represented only 4.86% (17 respondents), while the 18–25 years age category had the lowest representation at 4% (14 respondents). The dominance of middle-aged respondents enhances the credibility of the study, as this demographic is often more knowledgeable about community health challenges and the utilization of Constituency Development Funds (CDF) for health-related interventions in Vubwi Constituency. This age distribution therefore provides a balanced and relevant basis for assessing the effectiveness of CDF in improving maternal and child health outcomes in the constituency.

Table 1 Age of Respondents

Value	Frequency	Percentage
36–45 years	100	28.57
26–35 years	85	24.29
46–55 years	82	23.43
56 years and above	17	4.86
18 - 25 years	14	4

Source: Field Data (2025)

- *Gender of Respondents*

The gender distribution of respondents shows a relatively balanced representation, with male respondents constituting 53% of the total sample, while female respondents accounted for 47%. This near-equitable distribution is significant for the study as it ensures that perspectives from both genders were adequately captured in examining the role of Constituency Development Funds (CDF) in improving maternal and child health outcomes in Vubwi Constituency. The slightly higher proportion of male respondents may reflect their involvement in community leadership structures, local decision-making processes, and oversight roles related to the allocation and implementation of development projects funded through CDF. On the other hand, the substantial representation of female respondents is particularly important given that maternal and child health issues directly affect women as primary beneficiaries and caregivers within households and communities. Their participation provides critical first-hand insights into the accessibility, quality, and effectiveness of health interventions supported through the fund. The balanced gender composition therefore strengthens the reliability and comprehensiveness of the findings by incorporating diverse viewpoints, thereby enabling a more holistic assessment of how CDF contributes to maternal and child health service delivery in the constituency.

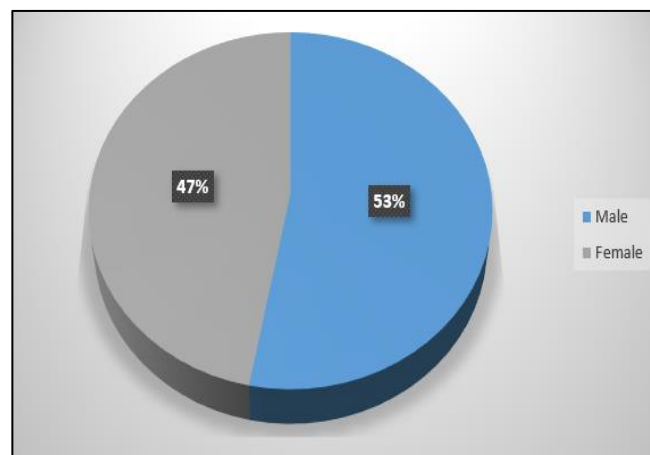


Fig 1 Gender of Respondents

Source: Field Data (2025)

- *Level of Education*

The educational attainment of respondents reveals a fairly diverse distribution, reflecting varied levels of academic exposure among participants involved in the study. Respondents with college education constituted the largest proportion at 22.57% (79 respondents), followed closely by those with primary education at 21.14% (74 respondents). Participants with university-level education accounted for 18.57% (65 respondents), while those who had attained

secondary education represented 15.14% (53 respondents). Meanwhile, respondents with no formal education comprised the smallest proportion at 7.71% (27 respondents). This distribution is significant as it demonstrates that the study captured perspectives from individuals with different educational backgrounds, thereby enriching the depth and inclusiveness of the findings. The relatively high proportion of respondents with college and university education suggests the presence of participants capable of critically evaluating development interventions such as Constituency Development Funds (CDF) and their impact on maternal and

child health outcomes in Vubwi Constituency. At the same time, the inclusion of respondents with primary education and no formal education ensures that the experiences and perceptions of grassroots community members, who are often the direct beneficiaries of health-related CDF initiatives, were adequately represented. This educational diversity enhances the credibility of the study by providing a broad spectrum of informed and lived perspectives regarding the effectiveness of CDF in improving maternal and child health service delivery within the constituency.

Table 2 Level of Education

Value	Frequency	Percentage
College	79	22.57
Primary	74	21.14
University	65	18.57
Secondary	53	15.14
No formal education	27	7.71

Source: Field Data (2025)

## V. DISCUSSION

### ➤ *Effects of CDF-Funded Health Projects on Maternal and Child Health Outcomes*

The findings on the effects of Constituency Development Fund (CDF)-funded health projects on maternal and child health outcomes in Vubwi Constituency indicate generally positive improvements across several key indicators, although the depth, consistency, and geographical spread of these improvements remain uneven. The most frequently reported effect was improved access to maternal health services, followed by reductions in maternal and child mortality, improved availability of drugs and medical supplies, increased skilled birth attendance, and a smaller proportion of respondents who reported no noticeable change. This overall pattern suggests that CDF interventions have contributed meaningfully to strengthening local health service delivery systems, particularly by addressing structural barriers such as long distances to health facilities, inadequate infrastructure, and limited availability of essential services. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that strengthening primary healthcare systems through targeted investments in infrastructure, human resources, and essential commodities is one of the most effective strategies for improving maternal and child health outcomes, especially in rural and underserved populations where health inequities are most pronounced.

This finding aligns with a study done by the United Nations Children’s Fund (UNICEF, 2020), which revealed that investments in community-level health systems significantly improve utilization of maternal and child health services, particularly antenatal care attendance, skilled birth delivery, and immunization coverage, because they reduce both physical and financial barriers to access. In the African context, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that decentralized health investments can improve service delivery outcomes in rural areas, but their effectiveness

depends heavily on governance quality, equitable resource distribution, and implementation efficiency. In Zambia, a study done by the Ministry of Health (MOH, 2022) revealed that rural health facility upgrading initiatives under decentralized funding arrangements have contributed to improved maternal health indicators, including increased facility deliveries and reduced complications, although disparities between constituencies remain a persistent challenge. Contrarily to the expectation that decentralization mechanisms such as CDF would produce uniform improvements across all communities, the findings suggest that benefits are unevenly distributed due to differences in implementation capacity, resource allocation priorities, and local governance dynamics.

Further supporting this, a study done by WHO AFRO (2021) revealed that maternal and child health outcomes improve significantly when health system strengthening interventions are consistently implemented, adequately funded, and supported by strong accountability structures that ensure equitable service delivery. Similarly, the World Bank (2019) found that while decentralized financing improves accessibility of services, its impact on health outcomes is significantly enhanced when accompanied by transparency, community participation, and efficient management systems. Overall, the findings demonstrate that CDF-funded health projects have positively influenced maternal and child health outcomes in Vubwi Constituency, but the sustainability and equity of these gains remain dependent on governance quality and implementation consistency.

- *Relationship Between Perceived Transparency and CDF Health Project Effectiveness*

The findings from the chi-square analysis reveal a statistically significant relationship between perceived transparency of CDF management and maternal and child health outcomes in Vubwi Constituency, indicating that governance transparency plays a crucial role in shaping how communities perceive the effectiveness of health

interventions. Respondents who reported higher levels of transparency were more likely to report improvements in maternal and child health outcomes, while those who perceived poor transparency were more likely to report limited or no improvements. This finding is supported by Transparency International (2021), which emphasizes that transparency in public financial management is essential for strengthening accountability systems, reducing corruption risks, and ensuring that public resources are effectively directed toward intended development priorities, particularly in essential sectors such as health.

This finding aligns with a study done by the World Bank (2020), which revealed that transparency in decentralized governance systems improves service delivery outcomes by enabling citizens to access information, monitor resource allocation, and hold duty bearers accountable for performance. In Africa, this finding is in tandem with the African Union (2021), which reported that transparent governance practices at local government level enhance public trust, improve participation, and strengthen the efficiency of development interventions. In Zambia, a study done by Transparency International Zambia (2022) revealed that constituencies with higher levels of financial disclosure and open reporting mechanisms under CDF tend to achieve better development outcomes and higher citizen satisfaction with public services. Contrary to contexts where transparency is weak or absent, the findings suggest that limited access to financial information reduces accountability and negatively affects perceived effectiveness of development interventions, including maternal and child health programs.

Further reinforcing this, a study done by UNDP (2020) revealed that transparency enhances civic engagement and improves governance outcomes by enabling communities to actively participate in monitoring development projects and influencing decision-making processes. Similarly, WHO (2021) emphasizes that transparency in health financing systems is critical for ensuring equitable distribution of resources and improving overall health system performance. Overall, the findings confirm that transparency is a central governance factor that significantly influences the effectiveness of CDF-funded maternal and child health interventions.

- *Effects of CDF Governance Factors on Maternal and Child Health Outcomes (Logistic Regression Analysis)*

The logistic regression analysis indicates that governance and accountability factors such as transparency, community participation, communication, and political interference are significant determinants of maternal and child health outcomes in Vubwi Constituency. Transparency, participation, and communication were positively associated with improved health outcomes, while political interference had a statistically significant negative effect, suggesting that governance quality plays a decisive role in determining the success of CDF-funded health interventions. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that effective governance is a foundational pillar of strong health systems and is essential for ensuring

equitable access, efficient resource utilization, and improved health outcomes in low-resource settings.

This finding aligns with a study done by the World Bank (2019), which revealed that governance quality strongly influences the effectiveness of public investment in health by shaping how resources are allocated, managed, and monitored at local levels. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that weak governance structures contribute to inefficiencies in public spending, while strong governance systems improve accountability and service delivery outcomes. In Zambia, a study done by the Ministry of Local Government (2022) revealed that CDF projects achieve better outcomes in constituencies where transparency and community participation are actively practiced, as these factors improve targeting of community needs and reduce resource misallocation.

Contrarily to contexts characterized by strong political interference, the findings suggest that politicized decision-making undermines the effectiveness of health interventions by diverting resources away from priority needs and reducing equity in service delivery. A study done by the International Monetary Fund (IMF, 2020) revealed that political influence in public investment decisions reduces efficiency, increases misallocation of resources, and weakens development outcomes, particularly in sectors such as health where technical prioritization is essential for achieving optimal results. Overall, the regression results demonstrate that governance quality is a strong predictor of maternal and child health outcomes under CDF-funded interventions.

- *Improved Access to Maternal and Child Health Services*

The findings reveal that CDF-funded health projects have significantly improved access to maternal and child health services through the construction, rehabilitation, and upgrading of health facilities, which has reduced geographical barriers, financial constraints, and delays in seeking care. Respondents emphasized that women and children are now able to access health services more quickly and conveniently, leading to increased utilization of antenatal care, child immunization services, and outpatient care. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that geographical accessibility is one of the most important determinants of maternal and child health service utilization, particularly in rural and remote areas where distance and transport challenges often delay timely care-seeking.

This finding aligns with a study done by UNICEF (2020), which revealed that proximity to health facilities significantly increases maternal health service utilization, improves early detection of pregnancy complications, and enhances child survival outcomes through timely medical intervention. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that investments in rural health infrastructure reduce inequalities in access to essential services and improve overall population health outcomes. In Zambia, a study done by the Ministry of Health (MOH, 2022) revealed that

upgrading rural health facilities under decentralized funding arrangements leads to increased service utilization and improved maternal and child health indicators. Contrary to earlier conditions where long distances and poor infrastructure limited access to care, the findings suggest that CDF investments have significantly reduced these structural barriers.

Further supporting this, a study done by the World Bank (2019) found that improved health infrastructure reduces delays in accessing care and increases the likelihood of timely intervention during maternal and child health emergencies. Overall, improved access demonstrates the critical role of CDF in reducing structural inequalities in healthcare delivery.

- *Reduced Maternal and Child Health Risks and Mortality*

The findings indicate that CDF-funded health projects have contributed to perceived reductions in maternal and child health risks and mortality through improved access to skilled health personnel, better-equipped facilities, and strengthened emergency response services. Respondents reported that maternal complications and child deaths have decreased in areas where health facilities have been upgraded and where skilled personnel are more readily available. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that access to skilled birth attendance and emergency obstetric care is essential for reducing maternal and neonatal mortality and preventing avoidable deaths.

This finding aligns with a study done by UNICEF (2020), which revealed that facility-based deliveries significantly reduce maternal and neonatal mortality by ensuring timely management of complications during pregnancy, childbirth, and the postnatal period. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that strengthening maternal health systems leads to substantial reductions in preventable maternal and child deaths in rural communities. In Zambia, a study done by the Ministry of Health (MOH, 2022) revealed that increased access to skilled health personnel and improved health infrastructure contributes to better maternal survival rates and reduced child mortality. Contrary to earlier conditions where home deliveries and delayed care were common, the findings suggest that improved facility-based care has enhanced safety and reduced preventable deaths. Further supporting this, WHO AFRO (2021) found that timely access to skilled maternal care is one of the most effective interventions for reducing maternal mortality in low-resource settings. Overall, the findings demonstrate that CDF investments contribute significantly to improved maternal and child survival outcomes when effectively implemented.

- *Improved Availability of Drugs and Medical Supplies*

The findings reveal that CDF-funded interventions have contributed to improved availability of essential drugs and medical supplies in some health facilities, although the improvement remains inconsistent across different areas. Respondents indicated that previous frequent stock-outs negatively affected treatment outcomes, but CDF support has

helped improve medicine availability in selected facilities. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that consistent availability of essential medicines is a fundamental requirement for effective primary healthcare delivery and improved maternal and child health outcomes.

This finding aligns with a study done by UNICEF (2020), which revealed that strengthened health supply chains improve treatment outcomes, reduce delays in care, and prevent avoidable deaths among mothers and children. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that improved pharmaceutical supply systems enhance health service delivery and reduce household expenditure on healthcare. In Zambia, a study done by the Ministry of Health (MOH, 2022) revealed that improved drug availability at rural health facilities enhances treatment efficiency and reduces mortality risks associated with delayed care. Contrary to previous periods characterized by frequent shortages, the findings suggest that improvements have occurred but remain uneven. Further supporting this, a study done by the World Bank (2019) found that weak supply chain management remains a major constraint to effective health service delivery in rural areas. Overall, improved drug availability enhances the quality and responsiveness of maternal and child health services.

- *Increased Skilled Birth Attendance and Facility Deliveries*

The findings indicate that CDF-funded health projects have contributed to increased skilled birth attendance and facility-based deliveries through improved infrastructure, better maternity services, and increased community trust in health facilities. Respondents reported that more women now prefer delivering at health facilities under the supervision of skilled health personnel, reducing reliance on home deliveries. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that skilled attendance at birth is critical for preventing maternal and neonatal deaths and ensuring safe childbirth outcomes.

This finding aligns with a study done by UNICEF (2020), which revealed that improved access to maternity services increases institutional deliveries and improves maternal and newborn health outcomes. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that investments in maternal health infrastructure significantly increase utilization of skilled delivery services. In Zambia, a study done by the Ministry of Health (MOH, 2022) revealed that improved maternity facilities in rural areas lead to higher rates of facility-based deliveries. Centrally to earlier reliance on home deliveries, the findings suggest a clear shift toward safer, facility-based childbirth practices. Further supporting this, WHO AFRO (2021) found that increasing skilled birth attendance is one of the most cost-effective interventions for reducing maternal mortality. Overall, the findings demonstrate improved maternal safety and strengthened health system utilization.

- *Inconsistent Impact and Unequal Improvement Across Communities*

The findings show that despite overall positive outcomes, the impact of CDF-funded health projects is uneven across different communities, with some areas experiencing significant improvements while others continue to face persistent challenges. This finding is supported by the World Bank (2019), which emphasizes that unequal implementation of development programs leads to disparities in service delivery outcomes and reinforces existing inequalities.

This finding aligns with a study done by the African Development Bank (AfDB, 2020), which revealed that uneven distribution of infrastructure investments results in unequal access to essential services. In Africa, this finding is in tandem with the African Union (2021), which reported that disparities in implementation capacity contribute to unequal development outcomes across regions. In Zambia, a study done by the Ministry of Local Government (2022) revealed that CDF benefits are often uneven due to differences in implementation efficiency, governance capacity, and resource allocation priorities across communities.

Contrary to expectations of equitable development under decentralized funding, the findings suggest that inequalities persist in service delivery outcomes despite CDF investments. A study done by UNDP (2020) revealed that uneven implementation weakens the overall impact of decentralized development programs and limits equitable access to services. Overall, the findings highlight the need for stronger equity-focused planning, monitoring, and implementation mechanisms to ensure balanced development outcomes across all communities.

- *Allocation and Management of Constituency Development Fund (CDF) Resources to Support Maternal and Child Health Services in Vubwi Constituency*

The findings on the frequency of Constituency Development Fund (CDF) allocation toward maternal and child health projects indicate that allocations are generally inconsistent within Vubwi Constituency, with the majority of respondents indicating that funding is only sometimes provided, while a substantial proportion reported rare or no allocation at all. This pattern suggests that maternal and child health is not consistently prioritized within the operationalization of CDF at constituency level, despite its central importance to public health and human development outcomes. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that maternal and child health systems require predictable, continuous, and adequately resourced financing in order to achieve sustained reductions in maternal mortality, neonatal deaths, and preventable childhood illnesses. When funding is irregular, health systems are unable to maintain continuity of interventions such as antenatal care, skilled birth attendance, immunization programs, and health infrastructure improvement, thereby weakening overall system performance.

This finding aligns with a study done by the United Nations Development Programme (UNDP, 2020), which revealed that inconsistent allocation of decentralized development funds leads to fragmented implementation of public services, particularly in rural settings where dependency on government funding is high and alternative resources are limited. In the African context, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that irregular financing of community-based health interventions contributes significantly to unequal distribution of health infrastructure and persistent disparities in access to essential services between rural and urban populations. In Zambia, a study done by the Ministry of Health (MOH, 2022) revealed that inconsistent funding of maternal health programs at local government level results in delays in constructing and equipping maternity facilities, shortages of essential drugs, and slow progress in improving maternal and child health indicators, especially in rural constituencies such as Vubwi. Contrary to expectations that decentralization through CDF would ensure stable and equitable allocation of resources based on community needs, the findings suggest that allocation remains unpredictable and not sufficiently aligned with health priorities.

Further supporting this, a study done by UNICEF (2020) revealed that inconsistent financing of community health systems undermines the effectiveness of preventive and promotive health interventions, as continuity is essential for behavior change communication, immunization coverage, and maternal health education. Similarly, WHO AFRO (2021) found that fragmented health financing at sub-national level weakens the resilience of health systems and reduces their ability to respond effectively to maternal emergencies. Overall, the inconsistency in allocation demonstrates systemic weaknesses in prioritization, planning, and budgeting within the CDF framework, ultimately limiting its impact on maternal and child health outcomes.

- *Transparency of CDF Fund Management*

The findings on transparency of CDF fund management reveal that respondents largely hold neutral, negative, or uncertain perceptions regarding how CDF resources are managed in Vubwi Constituency. A significant proportion of respondents indicated that they are not fully aware of how funds are allocated, disbursed, or monitored, while others expressed dissatisfaction with the level of openness in financial reporting and communication. This finding is supported by Transparency International (2021), which emphasizes that transparency in public financial management is a fundamental requirement for accountability, citizen trust, and effective governance, particularly in decentralized systems where decision-making authority is closer to the community. Without clear and accessible financial information, communities are unable to assess whether resources are being used efficiently or equitably, especially in sensitive sectors such as maternal and child health.

This finding aligns with a study done by the World Bank (2020), which revealed that weak transparency mechanisms in public finance systems significantly reduce citizen confidence in government programs and limit meaningful

public participation in monitoring development projects. In Africa, this finding is in tandem with the African Union (2021), which reported that insufficient financial disclosure in local governance structures leads to mistrust, weak accountability, and reduced civic engagement in development planning and oversight processes. In Zambia, a study done by Transparency International Zambia (2022) revealed that limited access to detailed CDF financial reports contributes to widespread perceptions of mismanagement and reduces public confidence in constituency-level development initiatives. Contrary to expectations that decentralization enhances transparency by bringing governance closer to the people, the findings suggest that transparency gaps persist due to weak institutional enforcement of disclosure requirements and inadequate communication mechanisms.

Further reinforcing this, a study done by OECD (2021) found that budget transparency is strongly associated with improved governance outcomes, reduced corruption risks, and better allocation of public resources. Similarly, WHO (2021) emphasizes that transparency in health financing is essential for ensuring equity, efficiency, and accountability in the distribution of health services. Overall, the findings suggest that weak transparency in CDF fund management undermines accountability structures and reduces public trust in maternal and child health investments.

#### ➤ *Needs-Based Allocation Versus Politically Influenced Prioritisation*

The findings indicate that although CDF guidelines emphasize needs-based allocation of resources, the actual prioritization of maternal and child health projects is significantly influenced by political considerations. Respondents reported that while community consultations are conducted to identify development needs, final decisions on funding often reflect the interests of politically influential actors, resulting in the prioritization of projects based on visibility, political appeal, or strategic advantage rather than urgency of health needs. This finding is supported by the World Bank (2019), which emphasizes that political interference in decentralized resource allocation systems often distorts efficiency and leads to suboptimal investment decisions, particularly in sectors such as health where timely intervention is critical.

This finding aligns with a study done by the African Development Bank (AfDB, 2020), which revealed that political influence frequently shapes local development priorities in many African countries, often resulting in unequal distribution of essential services and infrastructure. In Africa, this finding is in tandem with the African Union (2021), which reported that weak institutional safeguards in decentralized governance systems allow political actors to influence resource allocation decisions, thereby undermining the principle of equitable and needs-based development. In Zambia, a study done by the Ministry of Local Government (2022) revealed that CDF project selection is sometimes influenced by political considerations, including leadership preferences and electoral visibility, rather than strictly technical assessments of community needs. Contrary to the intended objective of participatory and needs-driven

planning, the findings suggest that political dynamics continue to play a decisive role in shaping development outcomes at constituency level.

Further supporting this, a study done by the International Monetary Fund (IMF, 2020) revealed that politicization of public investment decisions reduces efficiency, increases misallocation of resources, and weakens overall development impact, particularly in low-income countries with constrained fiscal space. Similarly, WHO (2021) emphasizes that health resource allocation should be guided by epidemiological burden and equity considerations rather than political interests. Overall, political influence undermines fairness, efficiency, and responsiveness in the allocation of CDF resources for maternal and child health services.

#### ➤ *Weak Transparency in Allocation and Budgeting Processes*

The findings reveal that transparency in allocation and budgeting processes for CDF resources is weak, particularly in relation to the availability of detailed financial information such as budget breakdowns, allocation criteria, and expenditure tracking mechanisms. Respondents indicated that while meetings are occasionally held to discuss development priorities, the financial information shared is often general and lacks sufficient detail to enable meaningful public scrutiny. This finding is supported by the World Bank (2020), which emphasizes that budget transparency is essential for accountability, citizen participation, and efficient public resource management, particularly in decentralized systems where local communities are expected to play an oversight role.

This finding aligns with a study done by UNESCO (2021), which revealed that limited access to financial information significantly reduces citizen engagement and weakens governance effectiveness in public service delivery systems. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2021), which reported that weak budget disclosure practices in local governments contribute to inefficiencies, misallocation of resources, and poor service delivery outcomes. In Zambia, a study done by Transparency International Zambia (2022) revealed that communities often lack access to detailed CDF financial breakdowns, making it difficult to assess whether health-related projects are adequately funded or equitably distributed. Contrary to expectations that public participation mechanisms inherently guarantee transparency, the findings suggest that without detailed financial disclosure, participation remains superficial and non-influential.

Further evidence from OECD (2021) indicates that strong budget transparency systems improve fiscal discipline, reduce corruption risks, and enhance the efficiency of public spending. Similarly, UNICEF (2020) emphasizes that transparent allocation of health resources is essential for improving maternal and child health outcomes, as it ensures equitable distribution of services and resources. Overall, weak budgeting transparency reduces accountability and

limits the effectiveness of CDF-funded maternal and child health interventions.

➤ *Limited Community Involvement in Management and Oversight*

The findings indicate that community involvement in the management and oversight of CDF-funded maternal and child health projects is limited, despite the existence of formal structures intended to promote participatory governance. Respondents reported that their involvement is often restricted to being informed about decisions rather than actively participating in monitoring implementation or verifying accountability processes. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that community participation in health governance is essential for ensuring accountability, responsiveness, and sustainability of health interventions.

This finding aligns with a study done by the African Population and Health Research Center (APHRC, 2020), which revealed that limited community participation in monitoring development projects reduces ownership, weakens accountability, and undermines long-term sustainability of interventions. In Africa, this finding is in tandem with the African Union (2021), which reported that weak citizen engagement in decentralized governance systems limits the effectiveness of public service delivery and reduces trust in development institutions. In Zambia, a study done by the Ministry of Health (2022) revealed that community participation in monitoring health projects remains weak, particularly in rural constituencies where technical oversight is dominated by officials and selected committees. Contrary to participatory governance principles, the findings suggest that communities are largely excluded from meaningful oversight roles.

Further supporting this, a study done by UNDP (2020) found that inclusive community participation improves accountability, reduces corruption risks, and enhances sustainability of development projects. Similarly, the World Bank (2019) emphasizes that citizen monitoring of public projects leads to improved efficiency and better service delivery outcomes. Overall, limited community involvement weakens accountability structures and reduces ownership of maternal and child health interventions.

➤ *Weak Communication and Information Dissemination*

The findings reveal that communication between implementing authorities and community members regarding CDF allocation and implementation is weak, irregular, and often delayed, resulting in limited awareness of development processes. Respondents reported that information is usually shared after decisions have already been made, limiting opportunities for community input and engagement. This finding is supported by UNICEF (2020), which emphasizes that effective communication is essential for transparency, participation, and trust-building in public service delivery systems.

This finding aligns with a study done by UNDP (2020), which revealed that poor communication in decentralized

governance systems leads to misinformation, reduced civic engagement, and weak accountability structures. In Africa, this finding is in tandem with the African Development Bank (AfDB, 2020), which reported that weak communication systems significantly reduce public awareness of development programs and limit citizen participation in monitoring service delivery. In Zambia, a study done by the Ministry of Local Government (2022) revealed that rural communities often receive delayed and incomplete information regarding CDF-funded projects, which reduces transparency and accountability. Contrary to expectations that decentralization improves information flow, the findings suggest that communication remains largely one-directional and inconsistent.

Further supporting this, WHO (2021) emphasizes that continuous and transparent communication between health authorities and communities improves health outcomes by increasing awareness and service utilization. Similarly, OECD (2021) highlights that effective communication strengthens governance systems by improving trust and accountability. Overall, weak communication reduces transparency and limits meaningful community participation in CDF-funded maternal and child health interventions.

➤ *Inefficiencies in Fund Utilisation and Implementation Delays*

The findings show that inefficiencies in fund utilisation and delays in implementation significantly affect the effectiveness of CDF-funded maternal and child health projects. Respondents reported that projects often experience delays due to administrative bottlenecks, procurement challenges, and weak coordination among implementing stakeholders, resulting in prolonged completion timelines. This finding is supported by the World Health Organization (WHO, 2021), which emphasizes that timely implementation of health interventions is critical for reducing maternal and child mortality and improving health system responsiveness.

This finding aligns with a study done by the African Development Bank (AfDB, 2020), which revealed that bureaucratic inefficiencies, weak procurement systems, and poor coordination among stakeholders frequently delay public project implementation across Africa. In Africa, this finding is in tandem with the African Union (2021), which reported that inefficiencies in public financial management systems reduce the effectiveness of decentralized service delivery and slow down development progress. In Zambia, a study done by the Ministry of Health (2022) revealed that delays in implementation of health infrastructure projects often result in prolonged shortages of essential maternal and child health services in rural facilities. Contrary to expectations that allocated funds translate quickly into implementation, the findings suggest that administrative and operational inefficiencies significantly slow down project execution.

Further supporting this, a study done by the IMF (2020) found that inefficiencies in public financial systems reduce development impact by delaying project completion and increasing implementation costs. Similarly, UNICEF (2020)

emphasizes that timely delivery of maternal and child health interventions is essential for improving survival outcomes and reducing preventable deaths. Overall, inefficiencies and delays significantly reduce the effectiveness and impact of CDF-funded maternal and child health interventions.

## VI. CONCLUSION

The study concluded that Constituency Development Fund (CDF)-funded health projects have generally had a positive effect on maternal and child health outcomes in Vubwi Constituency. The findings indicated improvements in key areas such as access to maternal and child health services, increased skilled birth attendance, better availability of drugs and medical supplies, and perceived reductions in maternal and child morbidity and mortality. These improvements suggest that CDF investments have played an important role in strengthening primary healthcare delivery by addressing critical infrastructural and service delivery gaps in rural health facilities. However, the extent of these benefits was not uniform across all communities, indicating variability in implementation and impact.

The study further concluded that governance-related factors significantly influenced the effectiveness of CDF health interventions. Transparency, accountability, community participation, and communication were found to enhance the positive outcomes of CDF-funded health projects, while political interference negatively affected their efficiency and equity. This demonstrates that beyond financial investment, the governance environment in which CDF projects are implemented plays a decisive role in determining whether health outcomes improve or remain stagnant.

In addition, the study established that improved physical access to health facilities was one of the most important contributions of CDF investments. The construction and upgrading of health facilities reduced geographical barriers and increased utilization of maternal and child health services, particularly antenatal care, facility-based deliveries, and immunization services. This improved accessibility was strongly associated with better health-seeking behaviour among community members, contributing to improved maternal and child health outcomes.

Generally, the study concluded that while CDF-funded health investments have positively contributed to maternal and child health outcomes in Vubwi Constituency, the sustainability and equity of these gains depend heavily on governance quality, consistent implementation, and equitable distribution of resources. Addressing the observed disparities across communities and strengthening accountability mechanisms would further enhance the effectiveness of CDF in improving maternal and child health outcomes in rural Zambia.

## RECOMMENDATIONS

- The Government of Zambia, through the Ministry of Local Government and Rural Development, should

strengthen monitoring and evaluation systems for Constituency Development Fund (CDF) health projects to ensure that investments consistently translate into measurable improvements in maternal and child health outcomes.

- The Vubwi Town Council and Constituency Development Fund Committee should enhance transparency and accountability mechanisms by regularly publishing project plans, budgets, and implementation progress reports to improve public trust and reduce inefficiencies in project execution.
- The Ministry of Health should ensure that all newly constructed and rehabilitated CDF-funded health facilities are adequately staffed with skilled health personnel and supplied with essential drugs and medical commodities to maximize their impact on maternal and child health service delivery.
- Community participation in the identification, planning, and monitoring of CDF health projects should be strengthened to ensure that interventions reflect local needs and promote ownership, sustainability, and effective utilization of health services.
- The government and implementing agencies should prioritize equitable distribution of CDF health investments across all communities in Vubwi Constituency to reduce disparities in access to maternal and child health services and ensure inclusive development outcomes.
- Future CDF allocations should increasingly focus on integrated maternal and child health interventions, including emergency obstetric care, outreach services, and transport systems for referrals, in order to further reduce maternal and child morbidity and mortality in rural areas.

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