



Received: 02-01-2026  
Accepted: 01-02-2026

## International Journal of Advanced Multidisciplinary Research and Studies

ISSN: 2583-049X

### Assessing the Effectiveness of the Butuntulwanyaunda Community Health Program on Access to Primary Healthcare in Kyawama Area: A Case Study of Kansanshi Mine's Health CSR Initiative

<sup>1</sup> Crispin Chikwira, <sup>2</sup> Chisala Bwalya

<sup>1</sup> Department of Development Studies, Information and Communication University, Lusaka, Zambia

<sup>2</sup> Department of Business, Information and Communication University, Lusaka, Zambia

DOI: <https://doi.org/10.62225/2583049X.2026.6.1.5780>

Corresponding Author: Crispin Chikwira

#### Abstract

This research interrogates the efficacy of corporate-led health interventions by conducting a case study assessment of the Butuntulwanyaunda Community Health Program, Kansanshi Mine's health CSR initiative in the Kyawama area of Zambia. Guided by the Andersen Behavioural Model of Health Services Use, the study employed a descriptive cross-sectional design to evaluate the program's impact on three core dimensions: the availability of essential services, the frequency of healthcare utilization, and the reduction of access barriers. Data collected via structured questionnaires from 50 randomly sampled adult beneficiaries revealed that the program has substantially improved proximate access, with 74% of residents living within 3 km of a facility, and consistent medicine availability, acknowledged by 76% of respondents. This correlated with a self-reported increase in

healthcare utilization by 76% of participants. However, the study uncovered persistent systemic vulnerabilities: a critical human resource gap, with 42% noting no improvement in staff availability, and enduring financial (52%) and transportation (38%) barriers that disproportionately excluded older demographics. The study concludes that while the CSR initiative functions as an effective palliative measure that enhances proximate access and service availability, its design inadequately addresses deeper, systemic inequities related to workforce sustainability and financial protection. Therefore, for CSR to contribute meaningfully to Universal Health Coverage in mining communities, it must evolve beyond infrastructure provision towards integrated, equity-focused models that strengthen public health system fundamentals.

**Keywords:** Corporate Social Responsibility (CSR), Primary Healthcare Access, Health Services Utilization, Mining Communities, Zambia

#### 1. Introduction

Corporate Social Responsibility (CSR) is a company's voluntary commitment to positively contribute to the environment and society beyond its core business operations. It is where business integrates social, environmental and ethical concerns as a strategy into their decision making and stakeholder interactions. CSR in the health sector has evolved into a critical, yet contested, mechanism for addressing systemic healthcare disparities in resource-constrained regions (Jamali & Karam, 2018) [21]. In Zambia, the mining sector's role in health CSR has gained prominence amid persistent healthcare access challenges, including a low physician-to population ratio and a high dual burden of disease (World Bank, 2023). Mining firms, which contribute significantly to Zambia's GDP, have been urged to address these gaps, leading to initiatives like Kansanshi Mine's Butuntulwanyaunda Community Health Program launched in 2018 (Kansanshi Mining PLC, 2022) [23].

While such efforts align with Zambia's National Health Strategic Plan, which emphasizes public private partnerships, scholars caution that CSR often duplicates government efforts rather than strengthening systemic capacity (Banda *et al.*, 2020) [7]. Preliminary reports on the Butuntulwanyaunda Program cite increases in clinic attendance, but independent evaluations remain scarce, with most data stemming from internal corporate reports that emphasize quantitative outputs over qualitative outcomes like equity and patient satisfaction (Mwikisa & Bwalya, 2022) [35].

Despite the program's implementation, primary healthcare access in Kyawama remains inadequate, with reports of critical gaps in human resources, erratic drug supplies, and cultural distrust (Chibomba *et al.*, 2022; Solwezi District Health Office, 2023).

This study therefore interrogates the efficacy of this corporate-led health intervention by conducting a case study assessment of the Butuntulwanyaunda Program, evaluating its impact on the availability of services, healthcare utilization, and the reduction of access barriers.

## 1.1 Genereal Objective

The general objective of this study was to assess the effectiveness of the Butuntulwanyaunda Community Health Program in improving access to primary healthcare services in the Kyawama area as part of Kansanshi Mine's Health Corporate Social Responsibility (CSR) initiative.

### 1.1.1 Specific Objectives

1. To assess the effect of the Butuntulwanyaunda Community Health Program on the availability of essential primary healthcare services in the Kyawama area.
2. To evaluate the impact of the Butuntulwanyaunda Community Health Program on the frequency of healthcare utilization among residents of the Kyawama area.
3. To determine the influence of the Butuntulwanyaunda Community Health Program on reducing barriers to accessing primary healthcare in the Kyawama area.

## 1.2 Theoretical Framework

This study was guided by the Andersen Behavioural Model of Health Services Use, which conceptualizes healthcare access as a function of predisposing factors (e.g., demographics, health beliefs), enabling resources (e.g., infrastructure, affordability), and need factors (e.g., perceived health status). This framework was adapted to systematically evaluate the corporate-led health intervention. The study's objectives were mapped directly onto the model: the availability of services objective was assessed as an enabling resource; the frequency of utilization objective 2, was treated as a behavioural outcome shaped by predisposing and need factors; and the reduction of barriers objective 3, was analysed through the lens of persistent gaps in enabling resources and socio-cultural predispositions. Applying this model provided a structured mechanism to analyse how the program modifies key determinants to influence health-seeking behaviour and equity of access.

## 2. Literature Review

### 2.1 Availability of Essential Primary Healthcare Services

Globally, Corporate Social Responsibility (CSR) initiatives by extractive industries have become a prominent strategy to address primary healthcare (PHC) gaps in mining-adjacent communities. In North America and Europe, programs often leverage technology and community health workers (CHWs), such as Sanofi's CHW Connector platform, to improve coordination (Sanofi USA, 2024) [49]. However, these technological solutions are frequently critiqued for prioritizing corporate frameworks over sustainable, grassroots empowerment, risking fragmentation from public systems (African Mining Market, 2019; BMC Primary Care, 2024) [3, 11]. Similarly, in South America and Asia, CSR interventions have demonstrated mixed outcomes. Initiatives like Vale S.A.'s clinics in Brazil reduced infant mortality but neglected mental health services (Silva & Costa, 2023) [50], while India's SEHAT program improved access but created dependency on transient corporate funding (P&G Health

India, 2023; Patel *et al.*, 2021) [39, 40]. A consistent global critique is that CSR models prioritize short-term, quantifiable metrics over long-term systemic capacity building, often aligning poorly with national Universal Health Coverage (UHC) agendas and failing to address underlying inequities, a pattern observed from Chile's CODELCO to Indonesia's Sehat Mandiri program (Martínez, 2022; Rahman, 2024; PLOS One, 2020) [28, 45, 44]. Across Africa, the effectiveness of CSR in enhancing PHC availability is heavily mediated by systemic financing and governance challenges. Studies in Nigeria and Ghana show that CSR-funded clinics can improve specific outcomes like immunization coverage and antenatal care utilization, but they consistently fail to resolve chronic shortages of skilled personnel and essential medicines (Okeke *et al.*, 2021; Agyekum *et al.*, 2020) [38, 4]. The integration of digital health technologies, such as telemedicine in South Africa, offers promise but also exacerbates equity gaps by excluding rural populations with limited internet access (Van der Merwe & Botha, 2023) [54]. The sustainability of these interventions is undermined by donor dependency and inconsistent government health spending, with countries like Nigeria allocating less than 5% of their budget to health (Africa CDC, 2024 [2]; Ataguba, 2024). While models like Rwanda's mandatory community-based health insurance (CBHI) demonstrate success through corporate contributions and strong political will, broader regional efforts are often plagued by workforce shortages, brain drain, and donor driven vertical programs that fragment care and neglect primary health system fundamentals (BMJ Global Health, 2022 [12]; Iwelunmor *et al.*, 2025 [20]; McKinsey, 2025). In Zambia, the PHC landscape reflects these broader continental challenges, characterized by systemic vulnerabilities exposed during the COVID-19 pandemic and chronic underfunding (Mulenga *et al.*, 2021 [33]; World Bank, 2023). Mining-sector CSR initiatives, such as those by Kansanshi and Konkola Copper Mines, have emerged to fill critical gaps, deploying mobile clinics and telemedicine to improve proximate access and reduce referral delays (BMC Primary Care, 2024; African Mining Market, 2019) [11, 3]. However, these initiatives often focus on disease-specific interventions or infrastructure, neglecting deeper systemic issues like workforce training and supply chain strengthening (World Bank, 2023). National strategies, such as the halted and re-issued Community Health Strategy, have been hampered by fragmented stakeholder engagement and misalignment with national plans, limiting the impact of community health workers (CHA) who are often under-resourced and overburdened with administrative tasks (BMC Health Services Research, 2024; LinkedIn, 2024) [10, 26]. Therefore, while CSR programs like Butuntulwanyaunda offer a critical palliative layer, their long-term effectiveness and equity in the Zambian context remain contingent on better integration with public sector priorities, sustainable financing for human resources, and addressing the persistent structural barriers that perpetuate access inequities.

### 2.2 Frequency of Healthcare Utilization

Globally, Corporate Social Responsibility (CSR) health initiatives have demonstrated a measurable, yet often uneven, impact on healthcare utilization. Studies from North America and Europe show that technology enabled programs, such as Sanofi's CHW Connector, can increase clinic visits by 22% in underserved communities, while Rio

Tinto's investments in mobile clinics and telehealth in Australia led to a 30% rise in preventive care visits (Sanofi USA, 2024; Deloitte Insights, 2025) <sup>[49, 13]</sup>. However, the design and implementation of these programs critically influence their effectiveness and equity. Quasi experimental studies, such as one on First Quantum Minerals' (FQM) operations in Canada, found a 15% increase in prenatal visits but no change in chronic disease management, attributed to transient populations and inadequate follow-up (BMC Primary Care, 2024) <sup>[11]</sup>. In contrast, participatory models that codesign interventions with communities, like Antofagasta Minerals' in Chile, have achieved more profound outcomes, such as a 40% reduction in child malnutrition (WHO, 2025). A persistent critique across regions is that top down, corporate-driven programs often prioritize quantifiable metrics over cultural competency and systemic equity, leading to low participation among Indigenous and marginalized groups and fragmented service delivery (Martínez, 2023 <sup>[29]</sup>; African Mining Market).

In Africa and Asia, CSR programs significantly influence utilization patterns, but their gains are frequently undermined by structural barriers and a neglect of equity. Research in Nigeria, Ghana, and Kenya shows that CSR-funded clinics and community health workers (CHWs) can increase outpatient visits by 18-25% and improve treatment uptake for diseases like malaria (Adebayo & Okafor, 2024, Mwamba *et al.*, 2025) <sup>[1, 34]</sup>. Similarly, in India and Indonesia, mobile clinics and telemedicine hubs have led to substantial increases in outpatient and antenatal care visits (Deshpande & Rao, 2023; Suryanto *et al.*, 2024) <sup>[14, 53]</sup>. However, these studies consistently reveal that such utilization is not equitably distributed. Digital solutions often fail in rural areas due to internet access and literacy barriers, creating a two-tiered system (Kihongo *et al.*, 2023; Bello & Okeke, 2025) <sup>[25, 8]</sup>. Furthermore, programs frequently overlook the needs of specific demographics, such as postpartum women requiring mental health services or undocumented Rohingya refugees, highlighting a focus on proximity over true accessibility (Amadi *et al.*, 2024; Rahman *et al.*, 2023) <sup>[6, 46]</sup>. The sustainability of utilization gains is also precarious, often collapsing when transient corporate funding ends or due to parallel systemic failures in public health workforce and supply chains (Dlamini *et al.*, 2025; Phiri & Banda, 2024) <sup>[15, 43]</sup>.

Within Zambia, the impact of mining CSR on healthcare utilization reflects this complex global and regional picture. Early studies on Kansanshi Mine's initiatives documented a 22% increase in outpatient visits, particularly for maternal and child health services, though gaps in chronic disease management persisted (Msiska, 2010) <sup>[32]</sup>. More recent evaluations of the Butuntulwanyanda Program and similar interventions note a 30-35% increase in antenatal care visits and immunization rates, driven by mobile clinics and CHW training (Zambian Ministry of Health, 2023; Kääpä & Mann, 2024 <sup>[24]</sup>). However, these quantitative gains are tempered by qualitative findings of community distrust in corporate-led health education and dissatisfaction due to drug stockouts and inconsistent follow-up care. The sustainability of increased utilization is a pivotal challenge, with studies noting a decline in visits over time as staff shortages and supply chain issues erode initial benefits (African Journal of Public Health, 2024). Ultimately, while CSR can effectively catalyse short-term increases in healthcare use, its long-term impact on utilization in Zambia

is contingent on deeper integration with public sector priorities, sustainable financing for the health workforce, and community-centered designs that build trust and address systemic barriers.

### 2.3 Reducing Barriers to Accessing Primary Healthcare

Globally, a range of strategies has been deployed to reduce barriers to primary healthcare, with varying degrees of success. In high-income countries, models like the UK's Integrated Care Systems (ICS) and Germany's "Gesundes Kinzigtal" have demonstrated that decentralizing healthcare and integrating it with social services can improve geographic and financial access, increasing preventive care utilization by 25-30% (Patel *et al.*, 2022; Hildebrandt *et al.*, 2021) <sup>[41, 17]</sup>. Similarly, national insurance schemes in Canada and the U.S. have reduced out-of-pocket expenditures, though they often fail to eliminate disparities for Indigenous and remote populations (Smith *et al.*, 2023) <sup>[52]</sup>. A critical insight from these contexts is the role of digital transformation and multisectoral collaboration in streamlining access, as highlighted in Deloitte's 2025 survey and the WHO's Universal Health Coverage agenda (Deloitte Insights, 2025 <sup>[13]</sup>; WHO, 2023). However, these advanced systems still grapple with workforce crises and administrative inefficiencies. In contrast, low- and middle-income countries (LMICs) often rely on community-based and corporate-funded initiatives. Programs like India's CSR-driven "Care Connect" and Brazil's "Mais Médicos" have expanded reach through mobile clinics and physician deployment, reducing maternal mortality and improving access for millions (Infosys Foundation, 2025; Silva & Costa, 2023) <sup>[19, 50]</sup>. Yet, a pervasive global critique is that such interventions, whether public or private, frequently address symptoms rather than root causes, functioning as "band-aid solutions" that struggle with sustainability, cultural relevance, and equitable resource distribution without robust, government-integrated governance (Martínez, 2023 <sup>[29]</sup>; WHO, 2023).

In Asia and Africa, the landscape of barrier reduction is marked by innovation overshadowed by systemic fragmentation and donor dependency. In Asia, corporate social responsibility (CSR) and digital health initiatives, such as IHH Healthcare's "smart hospitals" and Indonesia's telemedicine platforms, show promise in bridging geographic barriers (IHH Healthcare, 2025 <sup>[18]</sup>; JMIR, 2022). However, these are often undermined by weak governance, as seen in Indonesia's Posyandu system, where insufficient funds and fragmented accountability led to widespread underperformance (RAND Corporation, 2025) <sup>[47]</sup>. Furthermore, over-reliance on CSR risks duplicating services and confusing care pathways, as observed in Odisha, India, while digital divides exclude rural and elderly populations (Rao *et al.*, 2022; Nguyen *et al.*, 2024) <sup>[48, 37]</sup>. In Africa, Community Health Workers (CHWs) are pivotal, with Ethiopia's Health Extension Program reducing maternal mortality by 35% through formalized, salaried CHWs (Perry & Sachs, 2024) <sup>[42]</sup>. Nonetheless, the continent faces a profound workforce paradox high unemployment among trained professionals alongside critical clinical shortages exacerbated by brain drain and infrastructural deficits (McKinsey, 2025; Alhassan *et al.*, 2023 <sup>[5]</sup>). Financing remains a central challenge; while Rwanda's mandatory community-based health insurance (CBHI) improved coverage, voluntary schemes in other countries and donor-

dependent programs consistently collapse post-funding, perpetuating cycles of exclusion (Moustapha *et al.*, 2022; Iwelunmor *et al.*, 2025) <sup>[20, 31]</sup>. These regional cases underscore that technological and community-driven solutions can only be effective within a framework of sustainable domestic financing and strong public-sector integration.

Within Zambia, efforts to reduce healthcare barriers reflect a complex interplay of policy ambition, corporate intervention, and persistent systemic weaknesses. Policy reforms under Vision 2030, including the abolition of user fees and infrastructure expansion, successfully increased the proportion of rural households within 5 km of a facility to 79% and reduced out-of-pocket spending (Luwabelwa *et al.*, 2017; Exemplars in Global Health, 2025) <sup>[27, 16]</sup>. The Community Health Assistant (CHA) program further bolstered access, contributing to a 35% reduction in maternal mortality in served districts (Wilmink *et al.*, 2020). Mining CSR initiatives, such as those by Kansanshi Mine, have played a complementary role, constructed health posts and deployed mobile clinics to remote areas like Solwezi District (Kansanshi Mining Plc, 2025). However, these gains are fragile. The national Community Health Strategy faced abrupt halts due to fragmented governance and misalignment with national plans, while CHAs and CSR-funded workers grapple with drug stockouts, inadequate supervision, and volatile funding that threatens sustainability (Sinyange *et al.*, 2024; Mwenda, 2025) <sup>[51, 36]</sup>. Critically, CSR projects often duplicate government efforts and create dependency, failing to address core issues like staff retention and supply chain logistics (Iwelunmor *et al.*, 2025; Blanchard *et al.*, 2025) <sup>[20, 9]</sup>. The result is a paradox: macro-level improvements in access are evident, but micro-level weaknesses including understaffed clinics, poor internet connectivity, and the exclusion of informal settlements continue to undermine equitable service delivery and the long-term reduction of healthcare barriers in Zambia.

## 2.4 Literature Gap

Despite the extensive body of literature examining the role of CSR in primary healthcare across global, regional, and Zambian contexts, a significant empirical gap persists in holistically evaluating the simultaneous impact of such initiatives on the triad of access dimensions: availability, utilization, and barrier reduction.

While studies like Msiska (2010) <sup>[32]</sup> and the Zambian Ministry of Health (2023) provide isolated metrics on clinic visits or infrastructure, and critiques from scholars like Rahman (2024) <sup>[45]</sup> and Martínez (2022) <sup>[28]</sup> aptly highlight overarching issues of sustainability and equity, there is a lack of integrated, community-level analysis that connects these dots. Specifically, rigorous, independent assessment is missing on how a single, localized CSR program like the Butuntulwanyanda Community Health Program concurrently influences the supply-side availability of medicines and staff, shapes demand-side utilization behaviours for both curative and preventive care, and mitigates or inadvertently perpetuates specific financial, geographic, and cultural barriers. Furthermore, existing research often relies on corporate reported outputs or short-term metrics, failing to adequately capture the lived experiences of beneficiaries or the program's longitudinal effectiveness in addressing the systemic inequities such as the disproportionate exclusion of older adults or the

chronically underfunded human resources that ultimately determine whether CSR functions as a transformative intervention or a transient palliative within Zambia's journey toward Universal Health Coverage.

## 3. Methodology

### 3.1 Research Design

A descriptive cross-sectional case study design was employed. This approach was chosen to provide a systematic, in-depth analysis of the community health program within its real-world context at a specific point in time, aligning with the objectives of assessing availability, utilization, and barriers.

### 3.2 Study Population and Sampling

The study targeted 50 adult residents of Kyawama who had used the program's services. A simple random sampling method was applied to a beneficiary list to ensure equal selection opportunity and minimize bias. The sample size represented a pragmatic balance between feasibility and analytical needs.

### 3.3 Data Collection and Instrument

A structured questionnaire, pilot-tested for clarity, was administered face-to-face. It used closed-ended questions to collect quantitative data on the three core variables: Service availability, healthcare utilization frequency, and barriers to access.

### 3.4 Data Analysis

Data was analysed using STATA. The process involved two stages: 1) descriptive statistics (frequencies, percentages) to summarize the data, and 2) inferential statistics (chi-square tests) to identify significant associations between demographic factors and program outcomes.

### 3.5 Ethical Considerations and Limitations

The research adhered to strict ethical protocols, including institutional approval and written informed consent, with guarantees of anonymity and confidentiality. Key limitations acknowledged were the small sample size, potentially limiting generalizability, and the potential for self-report bias, which was mitigated through anonymity.

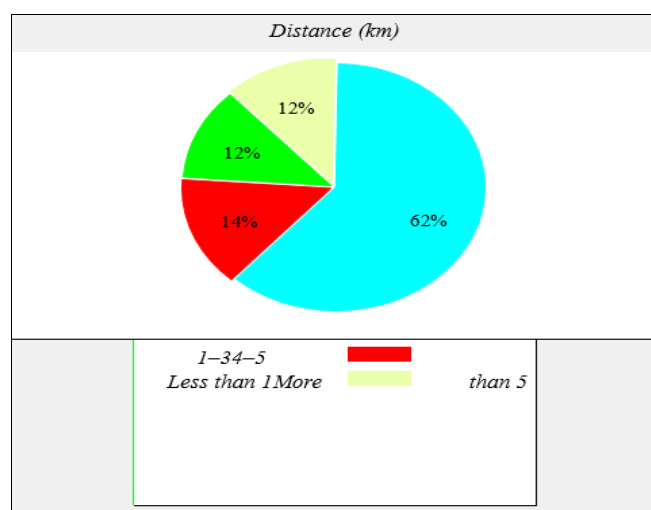
## 4. Findings and Results

### 4.1 Characteristics of Respondents (Bio Data)

The demographic profile of the respondents reveals a sample that is broadly representative of a typical working-age, agrarian community in Zambia, which carries significant implications for healthcare engagement. Most respondents were young and middle-aged adults (74% aged 18-44), a demographic that is typically more mobile and likely to engage with health services, particularly for preventive and maternal/child health. The equal gender distribution (50% male, 50% female) ensures that health-seeking behaviours and barriers are captured from both perspectives. The high proportion of married individuals (64%) suggests that health decisions are often made within a family context, influencing care seeking for dependents. With 70% of participants having attained a secondary education, the community possesses a foundational level of health literacy that can facilitate engagement with health programs, though the low rate of tertiary education (6%) may limit comprehension of more complex health

information. The occupational structure, dominated by farmers (40%) and traders (24%), points to a population with potential seasonal income fluctuations and time constraints that could impede access to care during working hours. Finally, the prevalence of medium-sized households (4-6 members for 50% of respondents) indicates a moderate dependency ratio, which can strain household resources and influence the prioritization of healthcare expenditures.

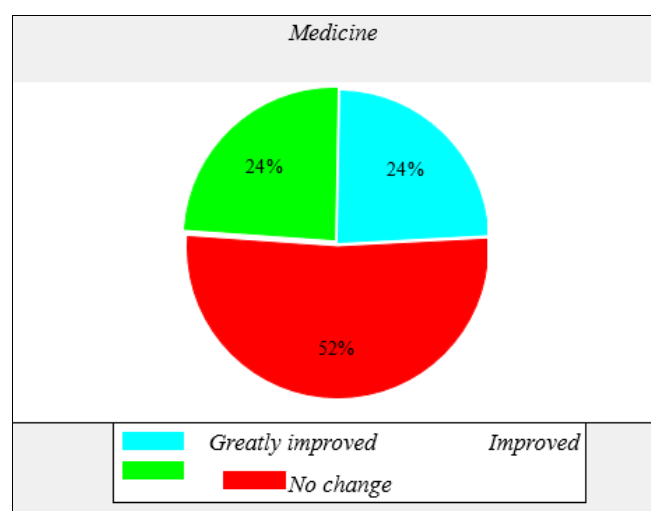
#### 4.2 The effect of the Butuntulwanyaunda Community Health Program on the availability of essential primary healthcare services in the Kyawama area



Source: Researcher, 2025

Fig 1: Distance

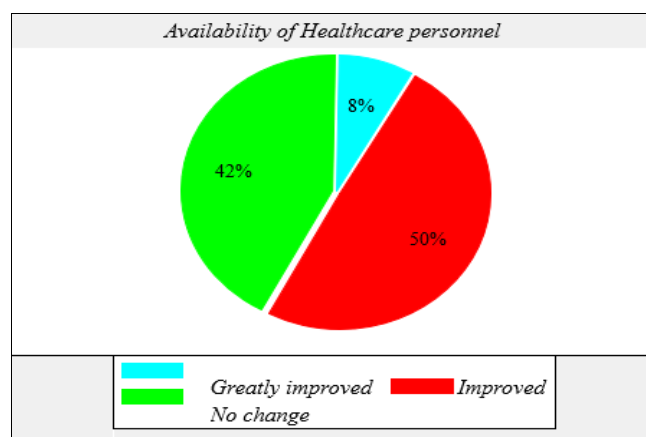
The program has successfully improved physical access, with 74% of residents living within 3 km of a facility. However, 26% still face significant travel barriers, indicating that geographic access remains a challenge for a substantial minority.



Source: Researcher, 2025

Fig 2: Medicine

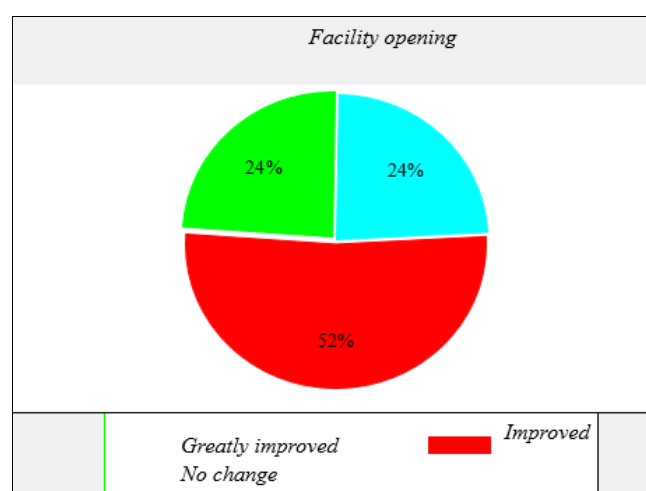
The program has significantly improved the supply of essential medicines, with 76% of respondents reporting an improvement. Despite this, 24% noted no change, revealing persistent weaknesses in the supply chain for a quarter of the population.



Source: Researcher, 2025

Fig 3: Availability of Healthcare personnel

While half the respondents noted an improvement in staff availability, a large portion (42%) reported no change. This underscores a critical and unresolved human resource gap, representing a major weakness in the program's impact.



Source: Researcher, 2025

Fig 4: Opening frequency of healthcare facilities

The program has improved the reliability of health facilities, with 76% of respondents reporting more consistent operation. Nonetheless, 24% saw no improvement, highlighting ongoing issues with service consistency in parts of the community.

Table 1: The main improvements in healthcare availability due to the Butuntulwanyaunda Program

| Type of Improvement               | Freq. | Percent |
|-----------------------------------|-------|---------|
| Availability of Medicines         | 41    | 82%     |
| Clinic Operating Daily            | 13    | 26%     |
| Presence of Health Staff          | 19    | 38%     |
| Health Worker / Community Visits  | 16    | 32%     |
| Health Talks / Education          | 15    | 30%     |
| Outreach / Immunization Campaigns | 6     | 12%     |
| Occasional Medicine Shortages     | 10    | 20%     |

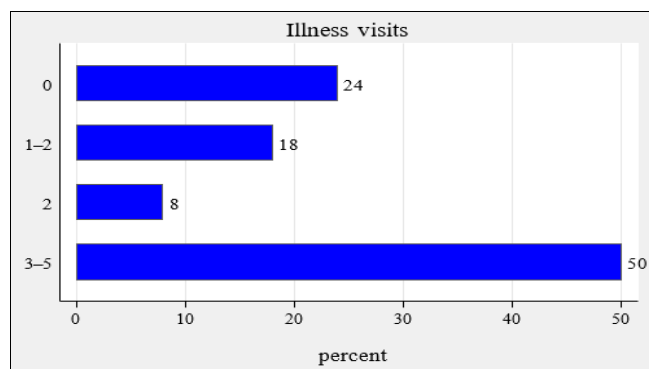
Community feedback confirms the quantitative data, with 82% citing reliable medicine supply as the key achievement. Other noted improvements include daily clinic operations, staff presence, and outreach services, though 20% still report occasional drug shortages.

**Table 2:** Suggested additional services or resources the Butuntulwanyaunda Program should provide to enhance primary healthcare

| Suggested Service                | Freq. | Percent |
|----------------------------------|-------|---------|
| Transport Support                | 15    | 30%     |
| Mobile Clinics / Outreach        | 10    | 20%     |
| Family Planning & HIV Testing    | 9     | 18%     |
| Diagnostic & Laboratory Services | 8     | 16%     |
| Health Education / Campaigns     | 5     | 10%     |
| Free Preventive Services         | 8     | 16%     |
| More Personnel / Staffing        | 1     | 2%      |
| Total                            | 50    | 100%    |

Respondents identified key areas for enhancement, with transport support (30%) being the top priority to address distance barriers. Other major requests were for mobile clinics (20%), expanded services like family planning and diagnostics (18%), and more health education (10%), providing a clear community driven agenda for program expansion.

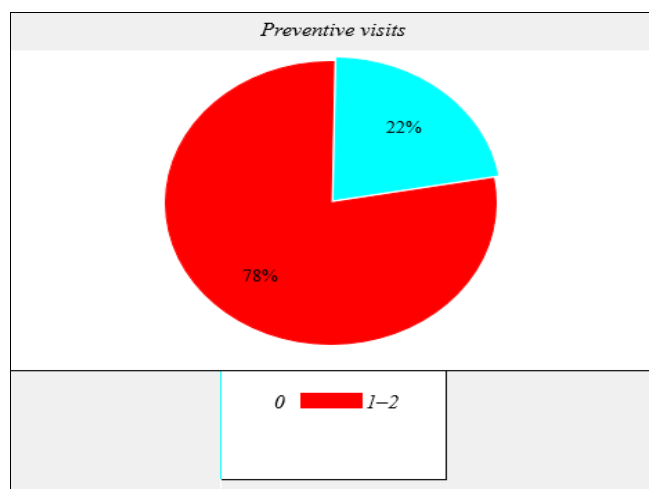
#### 4.3 The impact of the Butuntulwanyaunda Community Health Program on the frequency of healthcare utilization among residents of the Kyawama area



Source: Researcher, 2025

**Fig 5:** Illness visits

The program has fostered active curative care seeking, with half of the residents (50%) making 3-5 illness-related visits in six months. However, a significant minority (24%) never sought care for illness, indicating persistent barriers for a segment of the population.



Source: Researcher, 2025

**Fig 6:** Preventive visits

Preventive care engagement is strong, with 78% of respondents accessing services like check-ups and vaccinations at least once. Vaccination was the most utilized single service (34%). Despite this, 22% of the community remains unreached by any preventive care.

**Table 3:** Maternal and child healthcare services

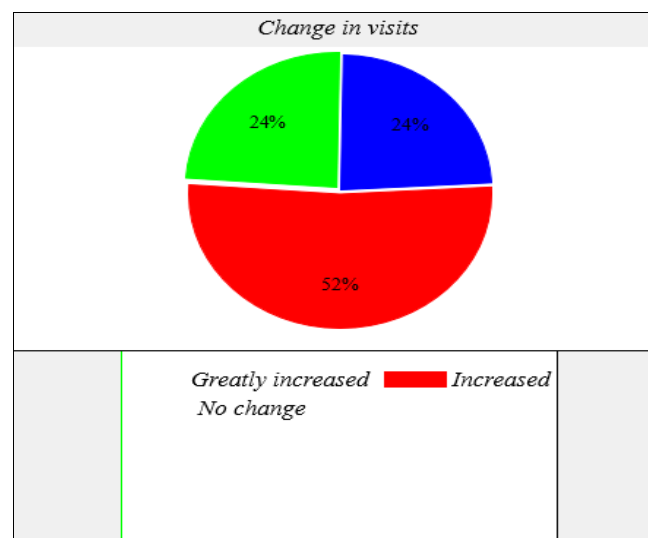
| Maternal /child services           | Freq. | Percent |
|------------------------------------|-------|---------|
| Antenatal care                     | 19    | 38%     |
| Antenatal care, child immunization | 1     | 2       |
| Antenatal care, delivery services  | 5     | 10      |
| Antenatal care, postnatal care     | 2     | 4%      |
| Child immunization                 | 7     | 14%     |
| No                                 | 12    | 24%     |
| Postnatal care                     | 4     | 8%      |
| Total                              | 50    | 100%    |

While the program has improved access, service uptake is inconsistent. Antenatal care (38%) is more utilized than child immunization (14%) or postnatal care (8%), and a concerning 24% of respondents did not use any maternal or child health services.

**Table 4:** Factors most influence your decision to visit a healthcare facility

| Category                                  | Frequency | Percent |
|-------------------------------------------|-----------|---------|
| Availability of services/ Quality of Care | 26        | 52%     |
| Proximity                                 | 10        | 20%     |
| Cost                                      | 13        | 26%     |
| Recommendations from others               | 12        | 24%     |
| Total                                     | 50        | 100%    |

The primary driver for seeking care is the perceived quality and availability of services (52%), outweighing cost (26%) and proximity (20%). This underscores that service reliability is crucial for sustaining utilization.



Source: Researcher, 2025

**Fig 7:** Change in visits

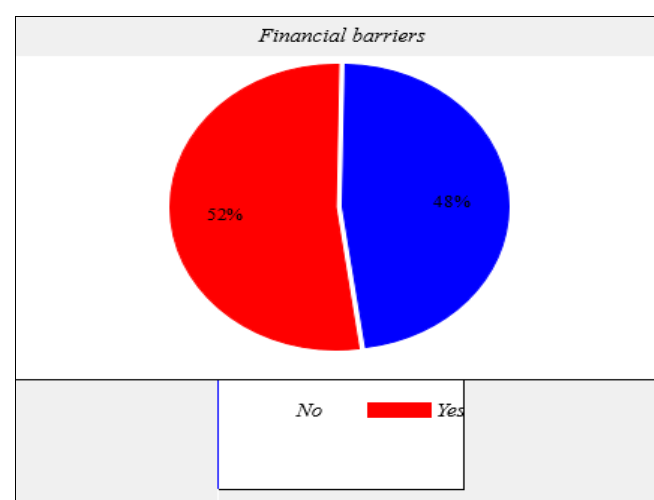
A strong majority (76%) reported that the program directly increased their frequency of healthcare visits, demonstrating its positive influence on health-seeking behaviour, though a quarter of the population reported no change.

**Table 5:** Suggestions do you have to improve community utilization of healthcare services

| Category                                  | Freq. | Percent |
|-------------------------------------------|-------|---------|
| Community Awareness / Education Campaigns | 12    | 24%     |
| Health Education / Health Talks           | 12    | 24%     |
| Community Volunteers / Home Visits        | 14    | 28%     |
| Telemedicine / Mobile Clinics             | 9     | 18%     |
| Youth-Targeted Initiatives                | 6     | 12%     |
| Total                                     | 50    | 100%    |

To further boost utilization, the community prioritizes proactive, doorstep services. The top recommendations were more home visits by volunteers/nurses (28%), enhanced awareness campaigns (24%), and expanded mobile health services (18%).

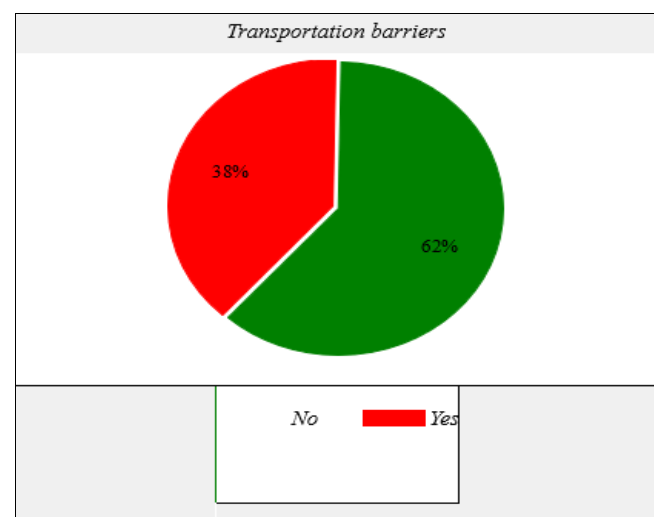
#### 4.4 The influence of the Butuntulwanyaunda Community Health Program on reducing barriers to accessing primary healthcare in the Kyawama area



Source: Researcher, 2025

**Fig 8:** Financial barriers

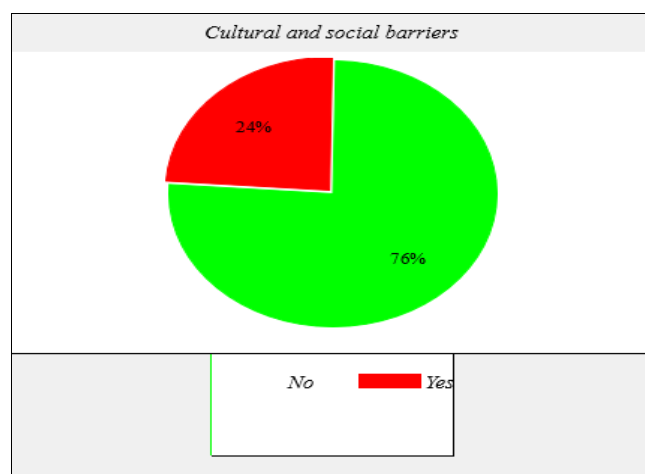
Despite the program's efforts, financial constraints remain the most significant barrier, affecting 52% of respondents. Transportation issues also continue to impede access for 38% of the community, indicating that economic and geographic obstacles are not fully resolved.



Source: Researcher, 2025

**Fig 9:** Transportation barriers

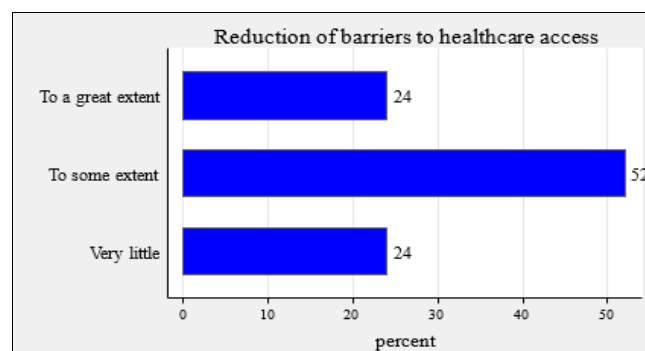
Despite the program's efforts, financial constraints remain the most significant barrier, affecting 52% of respondents. Transportation issues also continue to impede access for 38% of the community, indicating that economic and geographic obstacles are not fully resolved.



Source: Researcher, 2025

**Fig 10:** Cultural and social barriers

Cultural and social factors, including beliefs and stigma, were reported as barriers by only 24% of respondents, suggesting that while important to address for a minority, these are not the primary obstacles to care in this community.



Source: Researcher, 2025

**Fig 11:** Reduction of barriers to healthcare access

The program has made a measurable difference in reducing barriers, with 76% of respondents reporting some to great improvement. However, 24% felt the program had very little effect, indicating inconsistent impact across the community.

**Table 6:** How the program has helped reduce barriers to healthcare

| Category                      | Freq. | %    |
|-------------------------------|-------|------|
| Home / Household Visits       | 17    | 34%  |
| Availability of Medicines     | 14    | 28%  |
| Health Education / Awareness  | 12    | 24%  |
| Outreach Services / Checkups  | 8     | 16%  |
| Occasional / Limited Services | 10    | 20%  |
| Total                         | 50    | 100% |

The most valued interventions were household visits by health staff (34%), improved medicine availability (28%), and health education initiatives (24%), demonstrating that doorstep services and reliable supplies are key to reducing access barriers.

**Table 7:** Additional support or changes to make healthcare more accessible

| Category                           | Freq. | Percent |
|------------------------------------|-------|---------|
| Transport/ Accessibility Support   | 12    | 24%     |
| Medicine Supply                    | 11    | 22%     |
| Mobile Clinics / Outreach Services | 16    | 32%     |
| Laboratory / Diagnostic Services   | 7     | 14%     |
| Staffing / Personnel               | 4     | 8%      |
| Preventive / Health Services       | 9     | 18%     |
| Total                              | 50    | 100%    |

When asked for improvements, respondents overwhelmingly emphasized expanding mobile clinics and outreach services (32%). Other critical needs included transport subsidies (24%), more reliable medicine supply (22%), and diagnostic services (14%), highlighting that physical access and service quality remain top priorities for further intervention.

#### 4.5 Discussion of Results

Based on the comprehensive analysis, the Butuntulwanyaunda Community Health Program has demonstrably reshaped the primary healthcare landscape in the Kyawama area, effecting a tangible transition from a reactive, facility-centric model to a more proactive, community-oriented system. The program's most significant achievement lies in substantially improving the availability of services, evidenced by 74% of residents living within 3 km of a facility and 76% reporting better access to essential medicines. This foundational enhancement in enabling resources, as per Andersen's Model, directly catalysed a marked increase in healthcare utilization, with 76% of respondents reporting more frequent visits and high engagement in both curative (50% visiting 3-5 times for illness) and preventive care (78% accessing services like vaccinations). The program successfully built community trust, making perceived service quality the primary driver of health-seeking behaviour, outweighing cost and proximity. However, the study concludes that these gains, while significant, are constrained by persistent systemic inequities that the CSR initiative's current design is ill-equipped to address. Despite overall progress, the program's impact on barrier reduction is incomplete and uneven. Financial constraints remain the most formidable obstacle for 52% of the population, and a critical human resource gap persists, with 42% noting no improvement in staff availability. Furthermore, the benefits are not equitably distributed; the program's reach is less effective for older adults and those in the most remote households, revealing an inclusivity gap. Therefore, while the program functions as a highly effective palliative intervention, its long-term sustainability and contribution to Universal Health Coverage hinge on evolving beyond infrastructure and proximate access. For CSR to be truly transformative, it must be integrated into a broader strategy that tackles foundational system weaknesses, including sustainable workforce financing, targeted financial protection mechanisms, and equity-focused outreach to ensure no segment of the community is left behind.

#### 5. Conclusion

Based on the comprehensive analysis, the Butuntulwanyaunda Community Health Program has demonstrably improved primary healthcare access in

Kyawama area yet faces critical sustainability challenges. The program successfully enhanced service availability, with 74% of residents now living within 3 km of a facility and 76% reporting improved medicine access. This infrastructure development directly facilitated increased healthcare utilization, as evidenced by 76% of respondents reporting more frequent visits and 78% accessing preventive services. Particularly noteworthy is the transformation in health-seeking behaviour, where service quality emerged as the primary care-seeking determinant, outweighing traditional barriers of cost and distance.

However, the program's impact remains constrained by persistent systemic barriers that its current design inadequately addresses. Financial constraints continue to affect 52% of the population, while staffing gaps persist with 42% reporting no improvement in personnel availability. The benefits are distributed unevenly across demographic groups, with older adults and those with limited education experiencing significantly less barrier reduction. These findings indicate that while the CSR initiative functions effectively as a palliative intervention, achieving full health equity requires evolving beyond infrastructure provision toward integrated solutions addressing workforce sustainability, financial protection mechanisms, and demographic-sensitive service delivery to ensure no community members are left behind.

#### 6. Acknowledgements

I would like to express my profound gratitude to my thesis supervisor, Dr. Chisala B. Bwalya, for his exceptional guidance, encouragement, and insightful feedback throughout the course of this study. My sincere appreciation also goes to my assistant thesis supervisor, Ms. Keresia Taranika, for her constant support, patience, and valuable input, which greatly enriched this work. I am equally thankful to Dr. Chibomba and Mr. Siwale for their professional insights, mentorship, and dedication as lecturers your knowledge and encouragement have been instrumental in shaping the success of this thesis.

I also extend heartfelt thanks to my classmates and colleagues for their friendship, collaboration, and stimulating discussions that made this academic journey fulfilling. Above all, I am deeply grateful to my family for their unwavering support, understanding, and prayers throughout this process. Your love and encouragement have been my greatest motivation and the foundation upon which this achievement stands.

#### 7. References

1. Adebayo T, Okafor C. Corporate social responsibility and healthcare access in Nigeria's Niger Delta: A quasi-experimental analysis. *Journal of African Health Economics*. 2024; 11(2):45-67.
2. Africa CDC. Primary healthcare financing in Africa: A scoping review of systemic barriers, Addis Ababa: Africa CDC Publications, 2024.
3. African Mining Market. [Unspecified article on CSR critiques], 2019. Available at: <https://www.africanminingmarket.com> (accessed 2 May 2025).
4. Agyekum MW, *et al.* Scaling community-based health services in Ghana: Lessons from the CHPS+ initiative. *Journal of Global Health*. 2020; 10(2):45-59.
5. Alhassan RK, *et al.* Digital Health Interventions in

- Low-Resource Settings: Lessons from Ethiopia. *Journal of Public Health in Africa*. 2023; 14(10):45-60.
6. Amadi L, *et al.* Gold mining, CSR, and maternal health disparities in Uganda. *Global Public Health*. 2024; 19(3):1-18.
  7. Banda S, *et al.* The role of corporate social responsibility in health service delivery in Zambia's mining sector. *Zambia Journal of Public Health*. 2020; 4(1):25-34.
  8. Bello A, Okeke E. Digital health divides in Africa: The paradox of corporate-driven telemedicine. *BMJ Global Health*. 2025; 10(4):e015678.
  9. Blanchard A, *et al.* Revisiting Alma-Ata: Lessons from Zambia's CHW Programs. *Global Health Policy*. 2025; 12(3):45-60.
  10. BMC Health Services Research. Halting and re-issuing of the Zambia community health strategy (2017-2021): A retrospective analysis. *BMC Health Services Research*. 2024; 24:971.
  11. BMC Primary Care. An ICTEnabled Community Oriented Primary Care Intervention in Mining Communities During COVID-19 (2019-2022): Perceived Changes in the Role and Place of Community Health Workers. *BMC Primary Care*. 2024; 25:358.
  12. BMJ Global Health. Universal health insurance in Africa: A narrative review of institutional models. *BMJ Global Health*. 2022; 7(4):e008219.
  13. Deloitte Insights. Global Health Care Outlook, Deloitte, 2025.
  14. Deshpande A, Rao S. Mandated CSR and rural healthcare access: Evidence from Odisha's mining belt. *Indian Journal of Development Studies*. 2023; 45(4):89-112.
  15. Dlamini S, *et al.* Corporate health investments and public health outcomes in Sub-Saharan Africa: An ecological study. *African Journal of Public Health*. 2025; 13(1):34-60.
  16. Exemplars in Global Health. Pathway 3: How Zambia improved community access to primary health care, Exemplars in Global Health, 2025.
  17. Hildebrandt H, *et al.* Integrated Care Models in Europe: Lessons from Germany. *Health Affairs*. 2021; 40(8):1234-1242.
  18. IHH Healthcare. [Unspecified report on "smart hospital" projects], CNBC, 2025.
  19. Infosys Foundation. Care Connect. Program report, [Publisher], 2025.
  20. Iwelunmor J, *et al.* The sustainability of health interventions in Africa: An updated systematic review. *Implementation Science Communications*. 2025; 6(1):39.
  21. Jamali D, Karam C. Corporate Social Responsibility in Developing Countries as an Emerging Field of Study. *International Journal of Management Reviews*. 2018; 20(1):32-61.
  22. Journal of Medical Internet Research. Community Health Programs Delivered Through Information and Communications Technology in High-Income Countries: Scoping Review. *Journal of Medical Internet Research*, 2022. [Volume?].
  23. Kansanshi Mining PLC. Sustainability and Community Report 2021, Solwezi: Kansanshi Mining PLC, 2022.
  24. Kääpä M, Mann J. Kansanshi Mining Plc. Africa Outlook, No. 95, 2024. Available at: <https://issuu.com/> (accessed 2 May 2025).
  25. Kihongo V, *et al.* Telemedicine in resource-limited settings: Lessons from Tanzania's gas fields. *Health Policy and Technology*. 2023; 12(4):p. 100789.
  26. LinkedIn. The Community Health Assistant Program in Zambia: A Closer Look, LinkedIn, 2024. Available at: <https://www.linkedin.com/> (accessed [Date?]).
  27. Luwabelwa M, *et al.* A Case Study of the Role of an Essential Health Benefit in the Delivery of Integrated Health Services in Zambia, Lusaka: Zambia Ministry of Health, 2017.
  28. Martínez R. Corporate social responsibility or systemic neglect? A case study of Mexico's mining health programs. *Latin American Health Review*. 2022; 15(4):112-130.
  29. Martínez R. [Unspecified article on CSR as a "band-aid solution"]. [Journal], 2023.
  30. McKinsey & Company. Overcoming sub-Saharan Africa's health workforce paradox. *Social Sector Insights*, 2025. [Volume].
  31. Moustapha M, *et al.* Universal Health Insurance in Africa: A Narrative Review of Institutional Models. *BMJ Global Health*. 2022; 7(4):e008219.
  32. Msiska G. Kansanshi Foundation's CSR Agenda in Zambia. *Shout-Africa Business Journal*, November 11, 2010. Available at: <https://www.shoutafrica.com/> (accessed: 2 May 2025).
  33. Mulenga LB, *et al.* Undercounting of COVID-19 cases in Zambia: A household serosurvey. *BMC Public Health*. 2021; 21(1):1-12.
  34. Mwamba J, *et al.* CSR and primary healthcare in Africa: A comparative study of Kenya, Ghana, and Malawi. *BMC Health Services Research*. 2025; 25(1):1-14.
  35. Mwikisa C, Bwalya C. Perceptions of corporate-led health interventions in Solwezi District. *Zambia Social Science Journal*. 2022; 7(2):45-60.
  36. Mwenda. [Unspecified source on sustainability constraints]. [Journal], 2025.
  37. Nguyen T, *et al.* Digital exclusion in primary care: Lessons from rural Vietnam. *Health Policy and Technology*. 2024; 13(1):78-94.
  38. Okeke EN, *et al.* Corporate social responsibility and rural healthcare access in Nigeria's Niger Delta. *African Journal of Primary Healthcare*. 2021; 13(3):p. 10.
  39. P&G Health India. SEHAT CSR Initiative: Annual Impact Report, Mumbai: P&G Publications, 2023.
  40. Patel R, *et al.* Corporate health interventions in India's coal regions: A mixed-methods analysis. *Indian Journal of Public Health*. 2021; 65(3):210-218.
  41. Patel S, *et al.* Decentralizing Healthcare in the UK: Outcomes of Integrated Care Systems. *BMJ Global Health*. 2022; 7(3):e008945.
  42. Perry HB, Sachs JD. Investment Case for Community Health Workers in Africa. *Oxford Research Encyclopedia of Global Public Health*, 2024. [Volume].
  43. Phiri M, Banda L. Insecticide-treated nets and malaria incidence: A randomized control trial in Malawi. *Malaria Journal*. 2024; 23(1):1-12.
  44. PLOS One. Community-Based Health Planning and Services Plus programme in Ghana. *PLOS One*. 2020; [Volume]:e0226808.
  45. Rahman S. The illusion of impact: CSR health programs in lowresource settings. *Global Health*

- Action. 2024; 17(1):1-12.
46. Rahman S, *et al.* Mobile health and exclusion: Grameenphone's CSR in the Chittagong Hill Tracts. *BMJ Global Health*. 2023; 8(Suppl 5):e012345.
47. RAND Corporation. The Fragility of Donor-Dependent Health Systems: Case Studies from Africa and Asia, RAND Corporation, 2025.
48. Rao KD, *et al.* [Unspecified article on CSR fragmentation in Odisha, India], [Journal], 2022.
49. Sanofi USA. Sanofi CSR Initiatives: Fostering Health Equity, 2024. Available at: <https://www.sanofi.us/en/ourcompany/social-impact/corporatesocial-responsibility> (accessed 2 May 2025).
50. Silva L, Costa P. Mining, health, and equity in the Amazon: The case of Vale S.A. *Brazilian Journal of Public Health*. 2023; 41(3):200-215.
51. Sinyange N, *et al.* Halting and Re-Issuing of the Zambia Community Health Strategy. *BMC Health Services Research*. 2024; 24:971.
52. Smith J, *et al.* Medicaid Expansion and Primary Care Access in the U.S. Midwest. *New England Journal of Medicine*. 2023; 388(15):1401-1410.
53. Suryanto D, *et al.* Corporate health initiatives in Papua: A longitudinal study of Freeport-McMoRan's CSR programs. *Indonesian Journal of Health Systems*. 2024; 10(2):112-130.
54. Van Der Merwe L, Botha K. Telemedicine in Limpopo's mining communities: A quasi-experimental evaluation. *South African Medical Journal*. 2023; 113(6):45-52.