Unspent and Unprepared: Rethinking Zambia's Budget Execution for Surveillance and Pandemic Preparedness and Response

AFIDEP
African Institute for Development Policy

GLOBESOLUTE
Innovating for Global Impact

Table of Contents

List of Acronyms and Abbreviations

ACDCP	Africa CDC Regional Investment Project
ALM	African Leadership Meeting
AU	African Union
CDC	Centers for Disease Control and Prevention
COVID-19	Coronavirus Disease 2019
DMMU	Disaster Management and Mitigation Unit
GHSI	Global Health Security Index
IHR	International Health Regulations
MOH	Ministry of Health
NHIS	National Health Insurance Scheme
NHIMA	National Health Insurance Management Authority
PPR	Surveillance and Pandemic Preparedness and Response
PFM	Public financial management (PFM
SADC	Southern African Development Community
SDGs	Sustainable Development Goals
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organisation
ZNPHI	Zambia National Public Health Institute
ZCERHSP	Zambia COVID-19 Emergency Response and Health Systems Preparedness

Executive summary

Zambia's domestic execution of Pandemic Preparedness and Response (PPR) funds remains the weakest link in its health emergency system—despite substantial increases in overall funding and sustained donor support. Between 2020 and 2024, the country mobilized significant resources to manage the COVID-19 pandemic and strengthen long-term preparedness, yet critical gaps in budget absorption, procurement, and implementation persist.

A rapid review of budget utilisation reveals that while allocations for PPR rose sharply—especially from donors—these funds were not consistently translated into timely interventions. Notably, Zambia's PPR budget at the Zambia National Public Health Institute (ZNPHI) increased by nearly 70% between 2022 and 2023, with donor contributions rising from 21% to 53% of the institute's total income. However, government contributions to ZNPHI remained flat during the same period, underscoring persistent dependence on external financing.

Execution trends varied widely across funding streams and program areas. Government-funded initiatives: performed relatively better where existing systems could be leveraged—such as the recruitment of 11,200 health workers in 2022, which achieved a 100% execution rate. However, donor-financed projects faced significant delays when implemented through government systems. For instance, only 26% of donor funds and 36% of Africa CDC project allocations were executed by ZNPHI in 2022. Even large-scale efforts like the World Bank-funded COVID-19 emergency project had disbursed just 51% of its US$49 million allocation by early 2024.

By contrast, donor-funded activities managed through parallel or off-budget systems—such as Global Fund commodity procurement and UNICEF- or WHO-led risk communication—achieved near-full execution. These interventions contributed directly to Zambia's pandemic response, including the distribution of PPE, expansion of testing, and vaccination of over 4.7 million people by mid-2022.

Nonetheless, persistent underutilisation of PPR funds had adverse consequences. Delays in procurement and project execution hampered the rollout of critical infrastructure like oxygen plants (only 37 of 80 planned hospitals were equipped by 2023) and slowed the digitisation of disease surveillance systems. These delays reduced the timeliness and impact of Zambia's response to outbreaks and risk undermining public trust and future donor engagement.

The report identifies key systemic bottlenecks: delayed fund disbursement, rigid public financial management (PFM) systems, weak sub-national capacity, and fragmented coordination between MoH and ZNPHI. Procurement inefficiencies—exacerbated by irregularities flagged by the Auditor General—were a recurring constraint. Additionally, the lack of a dedicated PPR fund or flexible budget line further restricted Zambia's emergency response capacity.

To close the execution gap, the report recommends five priority actions: (1) fast-track disbursement and flexible fund reallocation, (2) modernize PFM systems and adoptprogram-based budgeting, (3) reform procurement and strengthen ZAMMSA, (4) build capacity at national and district levels, and (5) enhance accountability through real-time reporting and stakeholder oversight.

Ultimately, Zambia's ability to respond to future outbreaks will depend not only on mobilizing resources—but on its capacity to spend them effectively. Strengthening domestic execution of PPR budgets is essential to ensure that every kwacha and dollar allocated for preparedness translates into timely, life-saving action.

1. Introduction

Pandemics and infectious disease outbreaks present profound challenges to health systems, economies, and public safety, underscoring the urgent need for sustainable financing for Surveillance and Pandemic Preparedness and Response (PPR). In Zambia, recurrent health crises—from COVID-19 and Mpox to persistent cholera outbreaks—have exposed critical vulnerabilities in health financing, emergency preparedness, and governance (Mudenda et al., 2022; ZNPHI, 2022). During COVID-19, critical areas of Zambia's pandemic response faced underfunding exceeding 90%, alongside systemic inefficiencies such as delayed resource disbursement, fragmented planning, and weak oversight (Chitah B, 2022; Mudenda et al., 2022). These challenges not only led to preventable mortality and economic disruption but also eroded public trust due to allegations of mismanagement and misuse of funds (Chitah B, 2022). Such gaps highlight Zambia's precarious reliance on volatile donor funding, which constitutes 49.4% of health expenditure, juxtaposed against insufficient domestic financing that remains below regional targets (MOH, 2024; ZNPHI, 2023).

Zambia's health financing landscape reveals systemic barriers to effective PPR. Despite policy reforms such as the removal user fees for Primary Health care (2013) and the introduction of National Health Insurance Scheme (2019), domestic public financing accounts for only 44% of health expenditure, with government health spending stagnating at 8.5% of the national budget—far below the 15% Abuja Declaration target (Chitah et al., 2018; MOH, 2024). Heavy donor dependency, coupled with inefficiencies in budget execution—including poor coordination, misaligned priorities, and lax financial controls—has left PPR systems chronically under-resourced. Critical gaps persist in surveillance infrastructure, laboratory capacity, and healthcare workforce training, undermining timely outbreak detection and response (GHI, 2021). These inefficiencies are compounded by the tension between rapid pandemic spending and robust public financial management (PFM), often resulting in uncoordinated expenditures and rent-seeking behavior. Addressing these challenges requires a granular understanding of how allocated funds flow between national and sub-national levels, where execution bottlenecks and inequities often emerge.

This is particularly urgent now, as Africa faces a 70% decline in official development assistance for health between 2021 and 2025—exposing countries like Zambia to deeper fiscal vulnerabilities just as public health emergencies are surging across the continent (Africa CDC, 2025). At the same time, escalating debt servicing costs, climate shocks, and recurring epidemics have forced a rethinking of financing models to ensure sustainability, equity, and resilience in national health systems (Africa CDC, 2025).

Aligned with the African Leadership Meeting (ALM) agenda and Sustainable Development Goals (SDGs), this rapid review evaluates Zambia's domestic budget utilisation for PPR to identify actionable pathways for strengthening health system resilience. By analysing fiscal flows, institutional coordination, and PFM practices, the review aims to inform strategies that enhance Zambia's capacity to meet health security goals while advancing equity and sustainability. Ultimately, improving domestic budget execution is vital for mitigating future crises, fostering public trust, and ensuring vulnerable populations are prioritized in national health strategies.

1.1 Objectives

The primary objective of this rapid review is to evaluate the effectiveness of Zambia's budget utilisation for PPR to strengthen health system resilience and align with global health security priorities. Specifically, it aims to:

I. **To analyse trends in PPR budget allocations and execution across government and donor-funded projects,**
highlighting disparities and identifying factors influencing fund absorption.

II. **Identify Bottlenecks:** Pinpoint inefficiencies and barriers in budget allocation and execution processes that hinder effective delivery of PPR programs.

III. **Evaluate Systemic Challenges:** Analyse institutional, structural, and governance-related obstacles that undermine efficient resource utilisation for surveillance and emergency preparedness.

IV. **Generate Policy Recommendations:** Provide actionable, evidence-based recommendations to improve budget execution, enhance financial accountability, and optimize domestic resource use for surveillance and emergency response activities.

1.2 Scope of the review

The review will focus on:

I. **Domestic Budget Utilisation:** Analysis of Zambia's government-funded allocations (2019–2024) for pandemic preparedness, surveillance, and emergency response, excluding in-depth donor funding mechanisms.

II. **National and Sub-National Levels:** Examination of budget execution across central institutions (e.g., MoH+ZNPHI) and decentralized health offices to identify equity gaps.

III. **Key Processes:** Efficiency of allocation, disbursement timelines, governance coordination, and equity in resource distribution.

IV. **Alignment with Global Goals:** Linkages to SDG 3, African Leadership Meeting (ALM) targets, and International Health Regulations (2005).

1.3 Methodology

This rapid review employed a desk-based approach, relying exclusively on secondary data and document analysis to evaluate Zambia's domestic budget utilisation for PPR. Key government and institutional reports were systematically examined to gather quantitative data and qualitative insights on PPR financing and execution. The core documents reviewed include:

- **Ministry of Health Budget Statements and Reports:** Annual budget speeches, financial reports, and expenditure statements providing data on health sector allocations and spending, including specific line items for disease surveillance and emergency response.
- **Auditor General's Reports and Expenditure Reviews:** Audits and expenditure tracking reports offering independent verification of spending, execution rates, and any noted irregularities in the use of health and PPR funds.
- **National Health Strategic Plans and Policies:** Strategic documents (such as the National Health Strategic Plan 2022–2026) outlining health sector priorities, which contextualise the level of emphasis on PPR and guide resource allocation decisions.

- **ZNPHI and Emergency Program Reports:** Frameworks and annual reports from the Zambia National Public Health Institute and relevant emergency response programs, detailing activities, budgets, and spending (particularly for surveillance and epidemic control initiatives).

Information from these sources was triangulated to identify consistent trends and findings. No new primary data were collected; however, where available, quantitative data from financial reports were used to calculate execution rates and funding gaps. The analysis also drew on comparative regional data (from WHO, Africa CDC, and other international agencies) to benchmark Zambia's performance against regional peers. Preliminary findings were validated through cross-referencing multiple sources to ensure accuracy and reliability of conclusions.

1.4 Expected outputs

The review will deliver the following outputs:

- **Rapid Review Report:** A comprehensive report detailing findings, including gaps in budget utilisation and recommendations for improvement.
- **Policy Brief:** A concise summary of findings and actionable recommendations for policymakers and stakeholders.

2. Findings

2.1 Health financing landscape

Zambia's health sector financing has evolved significantly since 2020, shaped largely by the COVID-19 pandemic. Total health budget allocations in Zambia have expanded significantly in recent years. For instance, the Ministry of Health (MoH) budget increased from K9.7 billion in 2021 to K13.9 billion in 2022, and further to K20.9 billion in 2024—representing a more than 115% nominal increase over three years. During this period, health spending rose from 2.6% of GDP in 2021 to approximately 3.3% in 2024, and the health sector's share of the national budget grew from 8.1% to 11.8%, reflecting the government's renewed commitment to strengthening the health system. However, external funding has remained a critical component: in 2021 about 20% of the health budget was financed by external resources, and in 2022 external financing still accounted for ~15% (roughly K1.86 billion of the K12.4 billion health budget) (UNICEF, 2022). Notably, the 2022 budget included K704 million earmarked for the COVID-19 response – all of which was funded by cooperating partners (UNICEF, 2022), underscoring the reliance on donor support for pandemic needs.

PPR financing in Zambia is embedded within broader health and emergency response budgets, with no dedicated or consolidated budget line. Resources are fragmented across multiple entities—including the Disaster Management and Mitigation Unit (DMMU), the Zambia National Public Health Institute (ZNPHI), and MoH — complicating coordination and diluting accountability.

. The Zambia National Public Health Institute (ZNPHI) emerged as a key player in coordinating these efforts, working alongside the MoH and development partners to channel resources into emergency operations. Established in 2015, ZNPHI's mandate was significantly strengthened by the Public Health Act of 2020, which granted it greater operational autonomy and clarified its leadership in public health emergencies. Despite this mandate, ZNPHI—the country's lead technical agency for health security—receives less than 1% of the total health budget annually (AFIDEP, 2025), limiting its ability to effectively lead preparedness and response activities.

Despite increased allocations, Zambia has faced challenges with budget execution. Health budget execution rates, which averaged around 90% in 2015–2017, plummeted to an average of just 68% during 2018–2020 (UNICEF, 2022). This decline in spending capacity, driven by limited fiscal space and administrative bottlenecks, threatened the delivery of health services (UNICEF, 2022). In 2020, the dual shock of COVID-19 and a constrained economy led to austerity measures that affected timely funding releases. Consequently, even as more funds were mobilized for health security, the system's ability to absorb and spend those funds effectively became a central concern.

On the donor side, unprecedented amounts of pandemic-related aid flowed into Zambia between 2020 and 2022. The World Bank, Global Fund, United States Government, World Health Organisation (WHO), and other partners provided emergency grants, loans, and in-kind support to bolster Zambia's pandemic preparedness and response (PPR). For instance, the World Bank committed a total of USD 49 million to Zambia's COVID-19 Emergency Response and Health Systems Preparedness Project (World Bank, 2021), while the Global Fund approved USD 112.1 million under its COVID-19 Response Mechanism to sustain HIV/TB/Malaria programs and strengthen health systems in the face of COVID-19 (CCM Zambia, 2025).

Overall, the period 2020–2024 saw a more diversified health financing mix in Zambia – with greater domestic funding for health, but also significant infusions of external funds dedicated to pandemic response.

2.2 Allocation and execution trends for PPR funding

In response to COVID-19, Zambia rapidly mobilized funding for pandemic preparedness and response – but execution of those funds has been uneven. Budget allocations for PPR spiked in 2020–2021 as the government and donors reprogrammed resources to epidemic control. The MoH reallocated funds internally and drew from contingency funds, while the central government accessed emergency financing (including an IMF Rapid Credit Facility and debt service relief) to create fiscal room for the COVID-19 response. In 2020, Parliament approved supplementary expenditures for health security, and by 2021 the health budget explicitly included a substantial COVID-19 component (e.g. the K704 million noted in 2022 was already being spent in 2021) (UNICEF, 2022). Donors similarly front-loaded PPR funds: the World Bank's initial USD 25 million COVID-19 response project (approved April 2020) was augmented with an additional USD 24 million in June 2021 to support vaccine deployment (World Bank, 2021), and the Global Fund's COVID-19 grants were largely disbursed in 2020–2021 to finance diagnostics, personal protective equipment (PPE), and health system buffers.

At the institutional level, ZNPHI's financial reports confirm this funding surge. Table 1 summarizes ZNPHI's audited financial performance for 2022 and 2023, showing year-on-year changes in government and donor support. It illustrates how total funding, donor contributions, and donor share all rose sharply from 2022 to 2023:

Year	GRZ (ZMW)	Grant Donor (ZMW)	Total Income (ZMW)	Donor Share (%)
2022	13,252,524	3,629,667	16,968,589	21%
2023	13,252,524	15,274,948	28,890,039	53%

Table 1. ***ZNPHI funding (ZMW) and donor share in 2022–2023 (source: ZNPHI audited financial statements).***

This data highlights a ~70% increase in ZNPHI's total PPR funding from 2022 to 2023. Crucially, all the growth came from donors: the government grant remained flat at ZMW13.25M, while donor funding more than quadrupled. As a result, the donor portion of ZNPHI's budget jumped from 21% to 53%. These trends underscore the growing external dependence of PPR financing at ZNPHI.

Execution trends, however, reveal absorption challenges. Government spending of allocated PPR funds lagged allocations, especially in the early pandemic phase. As noted, overall health budget execution averaged only ~68% in 2018–2020 (UNICEF, 2022), and this included critical PPR programs that suffered delays in procurement and implementation. An Auditor General's review of COVID-19 expenditures (Feb–July 2020) highlighted significant underutilisation and misallocation of funds – with about K652 million in over-committed purchases that lacked financing and K60 million in public funds irregularly parked in commercial bank accounts (Open Zambia, 2020). Such irregularities effectively tied up resources that could have been used for the response. Even by late 2023, some major PPR investments were only partially executed. For example, a progress report on the World Bank-funded project showed that as of March 18, 2024, only 51% of the project's USD 49 million had been disbursed (USD 24.86M out of USD 49M) despite 86% of the project time elapsed (World Bank, 2024). This low execution rate indicates that many planned activities (such as establishing oxygen plants and telemedicine capacity) were still in progress or delayed.

On the other hand, certain PPR funding streams achieved high execution. Many donors adopted parallel delivery mechanisms to avoid government bottlenecks, leading to quick disbursement on critical needs. The Global Fund, for instance, incorporated its COVID-19 grants into existing HIV/TB and malaria programs and front-loaded procurement of commodities; by mid-2021 it had moved unspent balances into dedicated COVID budgets for closer oversight (CCM Zambia, 2025).

As a result, the vast majority of Global Fund's ~ USD112 million COVID support was executed on time – primarily via procurement of test kits, laboratory supplies, PPE, and other health products. Off-budget humanitarian assistance (e.g. from WHO and UNICEF) also translated into immediate in-kind support (equipment, training, etc.) with near-100% utilisation.

Overall, donor-funded PPR projects tended to disburse faster than government-managed funds, but they often bypassed national systems. The period thus exhibited a dichotomy: ample PPR funding was available, yet utilisation was suboptimal within government channels, prompting a need to improve absorptive capacity going forward.

2.3 Funding sources and year-on-year allocations

Pandemic Zambia's pandemic preparedness and response from 2020 to 2024 was financed through a combination of domestic funds and a multiplicity of external sources:

- **Government of Zambia:** The government's own contribution included budget reallocations and emergency provisions for health. In 2020, as COVID-19 hit, the Treasury redirected funds to the Disaster Management and Mitigation Unit (DMMU) and MoH for outbreak control. Though precise figures for 2020 are scattered, by mid-2020 the Ministry of Finance reported receiving K12.9 million in cash donations from various local and international donors to the government's COVID fund (Office of the Auditor General, 2020) (in addition to substantial in-kind donations). In 2021 and 2022, the government began mainstreaming PPR in the budget. The 2022 national budget, for example, allocated K930 million for recruiting 11,200 health workers as a direct response to health system gaps exposed by COVID-19 (Lusaka Times, 2022). It also continued funding for surveillance and routine immunisation to ensure pandemic efforts did not derail other health services. Across 2020–2022, the government sought emergency loans – including an IMF Rapid Credit and World Bank Development Policy Operation – part of which supported the health sector's COVID-19 related expenditures (e.g. vaccine procurement co-financing and health worker salaries).

- **World Bank:** The World Bank was a major financier of Zambia's COVID-19 response. In April 2020 it approved the Zambia COVID-19 Emergency Response and Health Systems Preparedness Project (USD 25 million), consisting of a $20M concessional credit and a USD 5M grant from the Global Financing Facility (World Bank, 2021). This funded immediate needs like testing, isolation centers, and medical supplies. In June 2021, the Bank provided an additional USD 24 million (USD 14M IDA credit + $10M grant) specifically to support Zambia's COVID-19 vaccine acquisition and deployment (World Bank, 2021). This brought the total World Bank COVID-19 support to USD 49 million by 2021 (World Bank, 2021).

Implementation was coordinated through ZNPHI/MoH as the Project Implementation Unit. As the acute phase of the pandemic waned, the World Bank also facilitated Zambia's access to the new Pandemic Fund in 2023: Zambia's proposal was approved for an USD 18.9 million grant to finance a Multisectoral Pandemic Preparedness and Response Project (ZaMPPR) (Pandemic Fund, 2025). This grant – with WHO and FAO as implementing entities – comes with USD 12.5 million in co-financing and focuses on longer-term capacity building for One Health surveillance, laboratories, and workforce development.

- **Global Fund to Fight AIDS, TB and Malaria:** The Global Fund pivoted significant resources to COVID-19 through its COVID-19 Response Mechanism (C19RM). Since 2020, over USD 112 million has been approved for Zambia via C19RM (CCM Zambia, 2025).

This includes grant flexibilities and new funding to purchase COVID-19 tests, PPE, oxygen equipment, and to reinforce systems (e.g. lab personnel, surveillance, and community networks) so that HIV, TB, and malaria services could continue during the pandemic. Notably, Global Fund support provided the bulk of commodities for Zambia's COVID-19 response: it procured millions of masks and gloves, testing reagents, and supported the expansion of Oxygen therapy capacity. By design, these funds were integrated into existing grant channels (MoH and the Church Health Association of Zambia as principal recipients), ensuring rapid allocation. For example, roughly USD 96 million was budgeted across Ministry of Health and CHAZ grants for COVID-related activities (90% of it for health commodities and logistics) (CCM Zambia, 2025). Global Fund support was allocated annually in tranches: initial emergency funding in 2020 (USD 40M), additional allocations in 2021 (USD 56M), and a further USD 15.4M approved in early 2022 (CCM Zambia, 2025).

- **World Health Organisation (WHO):** WHO provided critical technical and financial support to Zambia's PPR efforts. While WHO's financial contribution was smaller in monetary terms, it filled key gaps in coordination, planning, and technical guidance. WHO supported the development of Zambia's COVID-19 Contingency & Response Plan in early 2020 and deployed experts to assist ZNPHI with surveillance, case management protocols, and risk communication. It also facilitated deliveries of essential supplies through the UN Supply Portal. Additionally, WHO's country office managed some grant funding (e.g. acting as an implementing partner for the Pandemic Fund grant alongside FAO (World Bank, 2023). Annual allocations from WHO included funding for training rapid response teams, strengthening the national lab network (PCR testing capacity), and improving the Emergency Operations Center. For instance, WHO AFRO provided emergency funding for genomics sequencing and contact tracing in 2021 and continued to support immunisation campaigns in 2022 (especially through the COVAX facility, in collaboration with Gavi/UNICEF).

- **United States and CDC Foundation:** The United States, through agencies like USAID, CDC, and the CDC Foundation (a nonprofit that mobilizes philanthropic and private-sector resources), was another key source of PPR funding. The U.S. Government provided direct bilateral assistance for Zambia's COVID-19 response – including an initial USD 1.87 million in early 2020 for emergency health assistance (Eric Mwanza, n.d.), followed by larger support via the American Rescue Plan in 2021 for vaccine delivery. U.S.-funded implementing partners assisted with risk communication, infection prevention in healthcare facilities, and oxygen supplies. The CDC Foundation in particular launched projects in Zambia to improve vaccination access and combat hesitancy. Over 2021–2022, the CDC Foundation channelled funds into partnerships with local NGOs to create community health posts, train health workers, and run public information campaigns (Bednar et al., 2023). These efforts were relatively small-scale in budget (hundreds of thousands of dollars per project) but high-impact – fostering collaboration among community leaders and health authorities and boosting vaccine uptake (Bednar et al., 2023). By engaging the MoH and ZNPHI closely in these projects, CDC Foundation funding helped build capacity that remains useful for future health emergencies (e.g. trained community health workers, data systems for tracking vaccinations).

- **Other Donors:** Several other development partners and philanthropic organisations contributed to Zambia's PPR funding. The United Kingdom, European Union, Germany, and China provided donations ranging from test kits and vehicles to cash grants for COVID-19 relief. UNICEF reallocated funding to procure cold chain equipment for vaccines and supported risk communication in provinces. The CDC Africa (through Africa CDC) donated laboratory consumables and helped establish genomic surveillance for new variants in 2021. The UN Central Emergency Response Fund (CERF) and bilateral donors also funded emergency water and sanitation interventions to mitigate COVID-19 and concurrent disease outbreaks (like cholera). While these contributions are hard to quantify year-by-year, they collectively filled vital niches. Notably, press releases by the Ministry of Finance in mid-2020 listed numerous pledges from donors (cash and in-kind), indicating a broad base of support (Office of the Auditor General, 2020). By 2022–2023, as focus shifted to broader health system recovery, some donor funding streams tapered off, but new ones (Pandemic Fund, etc.) began to replace them to ensure sustained PPR financing.

Zambia's PPR funding across 2020–2024 was multifaceted: domestic budgets funded core health system strengthening, while external partners financed specific PPR inputs like vaccines, laboratories, and surge personnel. Annual allocations peaked in 2020–2021 when emergency grants poured in and have since transitioned toward longer-term preparedness investments by 2024. The challenge remained to coordinate these diverse funding sources under a coherent national plan.

2.4 Budget execution by program area

Breaking Examining PPR funding through the lens of key program areas reveals how resources were allocated and utilized in each pillar of pandemic preparedness:

- **Disease Surveillance and Epidemiological Systems:** Investments in surveillance focused on scaling up Zambia's capacity to detect and monitor outbreaks. A significant portion of funding went into the Field Epidemiology Training Program (FETP) and surveillance network expansion. With CDC support, Zambia's FETP had been training epidemiologists since 2014, and during 2020–22 this program was intensified to staff the COVID-19 response (CDC, 2024). Dozens of surveillance officers and data managers were trained or deployed at national and sub-national levels. Donor funds equipped the national Emergency Operations Center (EOC) at ZNPHI with communications technology and supported the rollout of an electronic disease surveillance system (eventually integrating COVID-19 case reporting). Execution:

Surveillance funds were largely executed through technical assistance and training activities, which saw high uptake. By 2021, Zambia had activated an incident management system and was reporting COVID-19 indicators daily from all provinces. However, some planned upgrades – such as a nationwide digital surveillance platform and expansion of community-based surveillance – faced delays due to procurement and IT infrastructure challenges. Overall, the surveillance pillar had good absorption for human resource and monitoring activities but underspent in areas requiring equipment procurement. This resulted in a partially modernized surveillance system: capable teams were in place (e.g. rapid response teams in every province), yet certain tools (like tablets for real-time reporting and integrated data systems) were slow to roll out.

- **Human Resources for Health (HRH):** Strengthening the health workforce was a top priority and saw major budget allocations. The government's recruitment of 11,200 health workers in 2022 was a flagship effort, backed by K930 million in the budget (Lusaka Times, 2022). These included doctors, nurses, lab technologists, and community health assistants deployed to facilities across the country. Donor-funded HRH initiatives complemented this by targeting specific gaps: for instance, the Global Fund grants paid for additional lab technicians and data clerks to support COVID-19 testing and results reporting(CCM Zambia, 2025), and the CDC Foundation funded community health workers and volunteers for vaccination outreach (Bednar et al., 2023). Execution: The HRH funds had one of the highest execution rates among PPR programs. The government successfully hired all 11,200 workers as planned in 2022 (100% execution of that initiative) – an unprecedented scale-up that increased MoH staffing levels by roughly 30% (National Assembly of Zambia, 2022). Training programs for existing staff (in infection prevention, case management, etc.) were conducted nationwide with support from WHO/UNICEF, utilizing nearly all allocated training budgets. One challenge was the payment of frontline health worker incentives during the emergency: an audit noted some irregularities and delays in disbursing allowances early in the pandemic (Office of the Auditor General, 2020). By late 2020 these issues were addressed with standardized COVID-19 duty allowances. In summary, HRH investments were fully utilised to expand and upskill the workforce, yielding tangible improvements – more health personnel at points of care and better preparedness for future health crises.

- **Laboratory Systems and Diagnostics:** This pillar received substantial funding to increase testing and treatment capacities. Global Fund and World Bank monies were directed to procure PCR machines, testing kits, reagents, and to establish molecular labs beyond Lusaka. At the start of 2020, Zambia had only one COVID-19 testing laboratory (at UTH in Lusaka); by mid-2021, thanks to these investments, over 10 laboratories across all provinces were equipped to conduct COVID-19 PCR testing, drastically improving diagnostic coverage. Donors also financed the reinforcement of oxygen delivery systems as part of lab/clinical support. The World Bank project allocated funds for 15 mobile PSA oxygen plants to be installed at regional hospitals (World Bank, 2024), along with related equipment (cylinders, regulators) to manage severe COVID-19 cases. Execution: Laboratory funding saw a mixed execution record. On one hand, consumables and small equipment procurement were very successful – Global Fund's ~$96M commodity budget (90% of its COVID funds) was swiftly executed, ensuring a steady supply of test kits and PPE (CCM Zambia, 2025). This enabled Zambia to perform over 3 million COVID-19 tests by 2022 and secure adequate PPE for health workers. On the other hand, capital investments in labs and oxygen infrastructure lagged. Procurement and installation of the PSA oxygen plants were delayed by logistical and environmental compliance issues, reaching only the commissioning stage by late 2023 (World Bank, 2024). According to project reports, by the end of 2023 only 37 out of a targeted 80 hospitals (46%) had functional oxygen delivery equipment in place (World Bank, 2024)– meaning many facilities remained under-equipped for critical care. Similarly, plans to establish a BSL-3 national reference lab and satellite laboratories for emerging pathogens were only partially realized by 2024. In sum, laboratory strengthening had high disbursement on consumables (tests/PPE), but under-execution in heavy equipment and infrastructure, leading to some enduring gaps (e.g. oxygen supply, genomic sequencing
capacity).

- **Risk Communication and Community Engagement:** Funding in this area aimed to ensure the public and all stakeholders were informed and involved in the pandemic response. The government, with donor assistance, stood up extensive risk communication campaigns. For instance, UNICEF and WHO supported daily radio and TV messaging on COVID-19 prevention, and the MoH established a call center and rumour-tracking mechanism at ZNPHI. The CDC Foundation and USAID partners funded community outreach initiatives, including creative approaches to reach rural populations and counter vaccine hesitancy (Bednar et al., 2023). Notably, Zambia's religious and traditional leaders were engaged through these funded programs to bolster trust in public health measures. Execution: Risk communication funds were fully utilized and yielded broad reach. By mid-2022, over 4.7 million people were fully vaccinated against COVID-19 – a result attributed in part to robust communication and outreach efforts that made vaccines accessible and acceptable (UNICEF, 2022). Communication materials (posters, radio spots, etc.) were produced in multiple local languages using allocated resources, and social behavior change campaigns (like the "Don't Be Sus" youth campaign backed by CDC Foundation) were rolled out on schedule. One gap was in last-mile community engagement in hard-to-reach areas – some planned activities like mobile audio-visual units and drama shows in remote villages had to be scaled down or delayed due to movement restrictions and funding constraints. Despite these hurdles, most risk communication programs met their targets, achieving nationwide awareness of COVID-19 by 2021 and contributing to improved public compliance with health guidelines in later waves. The execution rate for risk communication budgets was high (nearly 100%), as these activities were relatively low-cost and managed by nimble teams outside the heavy bureaucratic process.

In summary, each PPR program area in Zambia saw substantial investment from 2020 through 2024, but their execution varied: HRH and risk communication funds were absorbed almost completely and translated into concrete outputs (new staff, vaccinated populations), whereas surveillance and labs faced more implementation bottlenecks, leaving some planned outputs only partially achieved. These disparities highlight where the system was most and least able to rapidly utilize funds, informing where future improvements are needed.

2.5 Government vs. Donor-funded project execution

A clear pattern emerges when comparing the execution of government-funded versus donor-funded PPR initiatives: donor-funded projects generally achieved higher and faster budget execution than government-funded ones, although there are notable nuances.

On the government side, execution was hampered by pre-existing public financial management issues and the sudden strain of the pandemic. The Ministry of Health relies on the Ministry of Finance for releases of budgeted funds, and during 2020–2021, fiscal stress led to delayed disbursements for many programs (UNICEF, 2022). Non-personnel budgets (for goods, services, capital projects) were especially affected. Thus, even though the government allocated substantial money to PPR (for example, emergency funds for the DMMU and MoH), actual spending lagged. For 2020, internal estimates suggest that less than 70% of the government's earmarked COVID-19 budget was spent within the year, with some activities rolling over into 2021. Key government-led efforts like the construction of isolation centers in all provinces or procurement of ventilators proceeded slowly, with some contracts only completed much later.

The public sector's execution was strongest in areas leveraging existing systems – e.g. adding health workers to the payroll (since paying salaries is a routine process) was done efficiently, but establishing new projects or large procurements under government processes encountered setbacks.

By contrast, donor-funded projects often employed parallel mechanisms and experienced different execution outcomes. Some donors bypassed country systems entirely – for instance, the Global Fund disbursed a large share of C19RM funds through CHAZ (a non-governmental entity) and directly procured commodities through its Pooled Procurement Mechanism. This meant funds were converted to supplies with minimal delays, unconstrained by local bureaucracy. The U.S. government channelled much of its support via international NGOs and contractors who could mobilize quickly. These off-budget approaches showed high execution (nearly 100% of funds used for intended purposes), but they did so by sidestepping government procedures. As a result, while immediate outputs were achieved, these funds did not flow through or strengthen national PFM systems

Even for donor projects implemented with government involvement, performance often outpaced purely government-funded programs. For example, the World Bank's USD 49M project – implemented by a Project Implementation Unit (PIU) at ZNPHI but following World Bank procurement rules – disbursed about half of its funds by early 2024 (World Bank, 2024). This 51% disbursement might seem low, but it still signified that roughly USD 25M was spent, including procurement of critical equipment that the government alone might have struggled to finance and execute. Similarly, UNICEF and WHO managed donor funds for risk communication and training by directly paying vendors and facilitators, achieving timely delivery of activities.
Government-funded projects, in contrast, often had to adhere to standard public procurement via the Zambia Public Procurement Authority, which introduced longer lead times and, at times, cancellation or re-tendering of projects due to compliance issues.

However, it is important to note that government vs. donor execution disparities were not absolute. In 2022, with a new administration and improved fiscal management, the government did demonstrate better execution of health funds. The successful recruitment of 11,200 health workers is a case in point – it was government-funded (K930 million) and executed fully within the year (Lusaka Times, 2022). Additionally, by 2022 the Ministry of Health significantly improved its budget absorption, buoyed by restored donor confidence and reformed management, allowing more predictable funding flows. On the donor side, some projects also faced bottlenecks: the World Bank-funded oxygen plants were delayed (a donor-funded activity with slow execution), and some Global Fund-financed construction of lab spaces had slow uptake by government implementers, showing that donor money is not a silver bullet if implementation capacity is limited.

In general, though, the trend was that donor-managed funds (especially those off-budget) had higher execution rates and speed, while government-managed funds had more varied execution, often lower, due to systemic bottlenecks. This resulted in a scenario where, for example, PPE and test kits supplied by donors arrived quickly and were fully utilized, whereas certain government-procured items or civil works took much longer, sometimes missing the peak of the need.

Policymakers have taken note of these differences: they highlight the need for Zambia to strengthen its public sector execution so that it can effectively use both its own funds and on-budget donor funds in future health emergencies. Bridging the execution gap between government and donor efforts will be essential for a cohesive and sustainable PPR financing approach.

2.6 Integration of MOH and ZNPHI Financial Performance

The Ministry of Health and the Zambia National Public Health Institute (ZNPHI) serve complementary roles in health security financing, and their integrated financial performance has become increasingly important. ZNPHI, established in 2015 and given more autonomy by the 2020 Public Health Act, is tasked with disease surveillance, outbreak response, and health security – functions that were thrust into the spotlight by COVID-19. During 2020–2024, the financial operations of MoH and ZNPHI became more intertwined, requiring careful coordination to ensure resources were optimally used for PPR.

Budget Structure: Initially, ZNPHI's activities were funded through the MoH budget (as a department) and directly by donors. For example, in 2020, ZNPHI drew on MoH budget lines for surveillance and lab services, while also managing donor project funds (such as the World Bank's PIU and CDC-funded programs). This created challenges in tracking and integrating expenditures. Over time, the government moved to give ZNPHI its own budget vote. By 2022, the National Budget explicitly allocated funds to ZNPHI for public health emergency operations and coordination (though much of its budget still came from externally financed projects). The integrated financial performance refers to how well MoH and ZNPHI together utilized the total funds available for PPR.

Coordination and Integration: A key insight from the COVID-19 experience is that strong integration between MoH and ZNPHI leads to better financial performance. In the early pandemic, there were instances of duplication and delays – for example, ZNPHI would plan an activity (like procuring test kits) with donor funds while MoH would separately budget for a similar activity, or approvals would bottleneck if MoH leadership was not fully briefed. By 2023, deliberate efforts were made to synchronize planning: ZNPHI and relevant MoH directorates (such as Public Health, Clinical Care, and Research) held joint planning sessions for the COVID-19 response and future PPR needs. According to the World Bank project reports, after a project orientation for MoH senior management in January 2024, support for ZNPHI-led project activities at the Director and Permanent Secretary level increased, reducing approval turnaround times (World Bank, 2024). Weekly coordination meetings were instituted, enabling faster decision-making on fund utilisation. This integration helped accelerate implementation in the latter stages of projects – a stark improvement from earlier, when ZNPHI's financial requests could be stuck awaiting MoH clearance.

Financial Performance Outcomes: When considering combined MoH+ZNPHI funds for PPR, performance has been moderate but improving. In 2020–2021, conservative estimates indicate that less than two-thirds of the total available PPR funds (government and on-budget donor) were spent – largely due to the systemic issues noted (procurement lags, etc.). However, if one factors in off-budget expenditures by ZNPHI and partners (which might not appear in MoH's financial reports), the effective utilisation was higher.

. By 2022, the integrated execution improved significantly: MoH's annual financial report for that year showed an uptake of most budgeted resources, and ZNPHI successfully managed multiple funding streams with minimal unused balances by year-end. The Ministry of Health and ZNPHI together executed most PPR-related funds in 2022–2023, albeit with some funds carried over due to multi-year procurement contracts.

One illustrative comparison is around surveillance: ZNPHI received partner funds to deploy surveillance officers, while MoH funded their salaries after recruitment. This cost-sharing approach meant that by end of 2021, all provinces had surveillance officers funded and active, indicating an integrated success (donor funding for initial deployment was absorbed and then government took over recurrent costs). In terms of financial reporting, ZNPHI, with support from partners, began producing integrated financial performance reports that covered both government allocations and donor project funds. These reports for 2020–2021 flagged problems like underutilisation of some funds due to lack of a timely disbursement mechanism. By 2023, a more integrated financial management, including the adoption of improved systems (e.g. the Activity Info-based M&E system for the World Bank project, which tracked activities and expenditures (World Bank, 2024)), allowed for better oversight of how funds were used across MoH and ZNPHI.

In summary, the integrated financial performance of MoH and ZNPHI in PPR has been on an upward trajectory. Initially, fragmentation led to inefficiencies – money earmarked for health security might sit idle if MoH and ZNPHI processes weren't aligned. But through the pandemic, integration improved: ZNPHI's role was solidified, and MoH leadership recognized the institute as the focal point for PPR. This has translated into more coherent budgeting and spending. Going forward, maintaining this integration (e.g. joint planning, unified reporting) will be crucial. Policymakers see ZNPHI as a model institute driving health security (CDC, 2024), and its effective integration into the national health finance framework means Zambia can better utilize funds for surveillance, labs, and response – whether those funds come from the treasury or from donors.

2.7 Comparative Summary of PPR Funding and Execution

To consolidate the above analysis, the table below provides a comparative overview of key PPR funding areas in Zambia – highlighting major sources of funds, allocations, and execu-tion status/outcomes in each area over 2020–2024

Key PPR Area	Funding Allocations (2020–2024)	Execution & Outcomes
Surveillance & EOC	– **Domestic:** MoH allocations for surveillance (incl. contact tracing) each year; operational support via DMMU in 2020. – **External:** CDC supported Field Epidemiology Training Program (ongoing since pre-2020); WHO funds for surveillance system upgrades; part of WB $49M & GF $112M earmarked for surveillance (e.g. surveillance officers, data systems).	– **Utilisation:** High execution in training and deployment of personnel (dozens of field epidemiologists trained, RRTs active in all provinces) (CDC, 2024) . – **Gaps:** Delays in rolling out national surveillance IT system (procurement lag); some planned community surveillance activities not fully implemented. – **Outcome:** National Public Health Emergency Operations Center fully functional; improved outbreak reporting, but integration of human-animal (One Health) surveillance just beginning (addressed by new Pandemic Fund project).
Laboratory Systems	– **Domestic:** Government funds for lab reagents and consumables (through ZAMMSA); capital budget for provincial lab infrastructure (some funds reallocated from 2020 budget). – **External: Global Fund ~US$96M** for COVID-19 commodities (tests, PPE, some lab equipment) (CCM Zambia, 2025) ; **World Bank ~$25M** for equipment & 15 oxygen plants (World Bank, 2024) ; additional US CDC/PEPFAR support for PCR machines and genomic sequencing.	– **Utilisation:** Nearly 100% execution on consumables procurement (PPE, test kits fully purchased and distributed) – largely via Global Fund and partners. – **Low execution on equipment/infra:** Only ~51% of WB project disbursed by Mar 2024 (World Bank, 2024) ; oxygen plant rollout at ~46% of target by 2023 (World Bank, 2024) due to procurement and installation delays. – **Outcome:** COVID-19 testing capacity expanded from 1 to >10 labs nationwide; ~37 hospitals equipped with functional oxygen systems (out of 80 planned) (World Bank, 2024) . Lab strengthening for future pandemics in progress but incomplete (e.g., BSL-3 lab not yet fully operational).
Health Workforce (HRH)	– **Domestic: K930 million in 2022** for recruiting 11,200 new health workers (govt budget) (Lusaka Times, 2022) ; continued budget support for salaries. – **External:** GF C19RM funded salaries for additional lab techs & community health workers (CHWs) (~US$18M via CHAZ) (CCM Zambia, 2025) ; CDC Foundation and USAID funded short-term surge staff and training.	– **Utilisation: 100% execution of government hiring plan** – all 11,200 health workers recruited and deployed by end 2022 (National Assembly of Zambia, 2022).. Recurrent costs absorbed into MoH wage bill. – Donor HRH funds (for training, contract staff) largely spent as planned – thousands of health workers trained in IPC, case management, vaccination, etc. – **Outcome:** Health workforce surge achieved, improving patient care and service continuity. Staff distribution improved (workers posted to rural areas as well). Some challenges in absorbing contract workers after project end, but overall workforce capacity for PPR markedly increased.

Key PPR Area	Funding Allocations (2020–2024)	Execution & Outcomes
Risk Communication	– **Domestic:** MoH health promotion unit budget (modest allocations each year, supplemented by DMMU resources for COVID sensitisation). – **External:** WHO/UNICEF grants for mass communication; CDC Foundation grants for community outreach campaigns (~US$0.5–1M range); various donor-funded social media and materials development.	– **Utilisation: High (≈100%) execution** – funds used to produce and air radio/TV campaigns, print IEC materials, deploy community educators. Communication activities implemented nationwide on schedule. – **Outcome:** Widespread public awareness of COVID-19 preventive measures; by July 2022, ~4.7 million people fully vaccinated (boosted by effective demand-generation) (UNICEF, 2022). Trusted community and religious leaders engaged. Surveys showed improved knowledge and acceptance of vaccines over time. Remaining challenges in countering misinformation promptly, but overall risk communication contributed to better uptake of interventions.
Government vs. Donor Funds	– **Government:** Total ~K? (billions) budgeted for COVID-19/PPR over 2020–2024 (e.g. K659M in 2020 supplementary, K1.3B in 2021, K704M in 2022 for COVID, etc.). – **Donors:** >US$200M cumulative for COVID-19 response 2020–2022 (WB $49M (World Bank, 2021), GF $112M (CCM Zambia, 2025), bilateral donors ~$40M+, etc.), plus new Pandemic Fund $18.9M grant (Pandemic Fund, 2025).	– **Execution Rate:** Government funds execution averaged ~68% in 2020 (lower at sub-national levels), improving to ~85% by 2022 (after fiscal reforms) – still some late spending (UNICEF, 2022). Donor funds execution varied: off-budget aid nearly 100% utilized (direct deliveries), on-budget donor projects ~50–80% by end of 2023 (e.g. WB project 51% by Mar 2024) (World Bank, 2024). – **Comparative Outcome:** Donor-funded interventions (PPE, vaccines, etc.) were generally delivered faster, while some government-led projects lagged. Lack of execution capacity initially limited the impact of government spending, but coordination improvements in later years narrowed this gap. Integrated reporting now shows better combined utilisation of resources.

Sources: Compiled from Ministry of Finance budget reports, Auditor General reports, and donor program documents (CCM Zambia, 2025; Lusaka Times, 2022; UNICEF, 2022; World Bank, 2021)

2.8 Implications of Underutilisation of Funds

Persistent Underutilisation of allocated funds for pandemic preparedness and response has direct and adverse implications on health outcomes and preparedness levels in Zambia. When financial resources are not fully translated into implemented activities, the consequence is a gap between plans and reality – essential interventions either happen late, at a reduced scale, or not at all. Several tangible implications were observed in the 2020–2024 period:

- **Delayed Readiness of Health Systems:** Every unspent kwacha meant a missed opportunity to strengthen the health system before the next wave or outbreak. For instance, the delays in executing funds for oxygen plant installation (only 46% of the target hospitals had functional oxygen by 2023 (World Bank, 2024)) meant that during the height of COVID-19 waves, many hospitals did not have on-site oxygen generation. This likely contributed to avoidable severe outcomes for patients who might have benefited from better oxygen supply. Similarly, underinvestment or slow investment in laboratory capacity early on hampered Zambia's ability to quickly identify and contain cases in the first wave – by the time lab capacity was expanded, the initial outbreaks had grown. In effect, underutilisation blunted the impact of what could have been more timely containment efforts.
- **Reduced Preparedness for Future Threats:** Underutilized PPR funds represents lost investments in long-term preparedness. For example, had all planned funds for surveillance and EOC strengthening been spent, Zambia might by now have a fully interoperable digital surveillance system and greater community-based surveillance coverage. Because some of these funds remained unused or were late to disburse, gaps persist in detection capabilities at community level. This was evident when Zambia faced a polio outbreak threat in 2022 (from a neighbouring country) – the surveillance network was stretched, partly because enhancements that were budgeted (like additional disease intelligence officers and mobile labs) had not materialized on schedule(UNICEF, 2022). The country's ability to prevent spillover of that outbreak was hindered by these readiness shortfalls.
- **Strain on Human Resources and Morale:** When funds earmarked for frontline responders (e.g. hazard allowances, training, equipment) are not released or executed properly, it affects health worker morale and performance. The Auditor General's interim COVID-19 audit pointed out unresolved issues like lack of incentives for frontline personnel and irregular payment of allowances (Office of the Auditor General, 2020). Underutilisation in this context meant some health workers did not receive promised support in a timely manner, likely leading to fatigue and reduced efficiency. Moreover, where funds for recruiting surge staff were delayed, existing staff had to bear a greater burden for longer. This can diminish the quality of response and even drive healthcare workers away (through burnout or attrition), undermining the PPR workforce base
- **Loss of Donor Confidence and Future Funding Risks:** If allocated donor funds remain unused, donors may reallocate those funds or be hesitant to commit new resources. Fortunately, in Zambia's case, most donor funds were eventually used, but the slow absorption (e.g. the World Bank project's low disbursement rate by 2023 (World Bank, 2024)) signalled to funders that implementation was challenging. This can jeopardize future support – for instance, if Zambia seeks additional financing for PPR, lenders may impose stricter conditions or be more conservative if past performance showed under-spending. In a sense, underutilisation can tarnish the country's financial credibility in the global health security arena. It's notable that the 2018 Health Public Expenditure Review had already flagged low execution as an issue reducing donor willingness to put funds on-budget (UNICEF, 2022), and under-execution during COVID could reinforce those concerns.

- **Inadequate Outcomes Despite Sufficient Inputs:** Ultimately, the measure of PPR success is whether the country mitigates the impact of pandemics. Underutilisation of funds led to some outcomes falling short of targets. For example, even though there were enough funds budgeted to reach a high COVID-19 vaccination rate by end of 2021, logistical and absorption issues meant Zambia did not hit the 70% adult vaccination goal until much later than anticipated (UNICEF, 2022). This delay likely contributed to continued community transmission and preventable hospitalisations. Likewise, plans to establish provincial isolation centers (one in each province) were only partially realized because capital budgets were not fully spent – meaning some regions lacked dedicated infectious disease treatment units, potentially worsening the spread in those areas.

In summary, when PPR funds are underutilized, the country's preparedness is undercut. The full benefit of the funding – whether it's a stronger lab network, a ready supply chain, or a trained cadre of responders – is not realized, leaving weaknesses that a pathogen can exploit. Zambia's experience underscores that money alone does not equal preparedness; how effectively that money is turned into functional capacity is what ultimately saves lives. Underutilisation in 2020–2024 likely meant that Zambia's COVID-19 response was less effective than it could have been (e.g. slower decline in cases, higher mortality than necessary, etc.), and it leaves lingering vulnerabilities as new threats (like Ebola, cholera, or another novel virus) loom. This situation has prompted Zambian authorities to urgently address execution bottlenecks so thatfuture PPR funding – which is expected to flow via mechanisms like the Pandemic Fund – will translate into concrete, life-saving improvements on the ground.

2.9 Bottlenecks in budget execution for PPR in zambia

Zambia's Several persistent bottlenecks impeded the efficient execution of PPR budgets in Zambia. Identifying and addressing these bottlenecks is crucial for improving future health emergency responses. The experience from 2020 through 2024 highlights the following major constraints:

- **Public Financial Management (PFM) and Bureaucratic Delays:** A major bottleneck was the slow release and cumbersome management of funds through government systems. The MoH relies on Ministry of Finance disbursements, and during the pandemic, late disbursements of funds were common, as noted in expenditure analyses (UNICEF, 2022). Even when money was allocated on paper, cash flow issues could stall activity implementation. Additionally, the requirement to route expenditures through centralized IFMIS (Integrated Financial Management Information System) without sufficient autonomy for emergency spending caused delays. Zambia did not have an immediately operational contingency fund mechanism for public health emergencies – the National Disaster Relief Trust Fund was not operationalized in time (Open Zambia, 2020), forcing all spending to go through standard budget channels. This lack of a rapid financing facility meant bureaucratic procedures slowed the response at critical moments.
- **Procurement and Supply Chain Inefficiencies:** Procurement proved to be one of the most significant chokepoints. The Auditor General's report and other evaluations revealed numerous procurement-related issues: cover bidding and uncompetitive contract awards (four contracts worth K10 million had collusive bidding, and contracts worth K194 million were awarded without competition)(Open Zambia, 2020), questionable contract awards (K384 million flagged)(Open Zambia, 2020), and instances of over-commitment (procurements exceeding available budget by K652 million) (Open Zambia, 2020).

These malpractices not only led to compliance issues but also often resulted in delayed or halted procurements (e.g., disputes and investigations froze the delivery of goods). Even without malfeasance, the normal procurement lead times were ill-suited to an emergency: preparing bidding documents, obtaining approvals, and delivering goods often took months. For example, the tendering and environmental approval process for the oxygen plants significantly set back their installation (World Bank, 2024). Moreover, Zambia's medical supply chain agency (ZAMMSA) was overwhelmed, leading to delays in distribution of procured items, such as a backlog in getting PPE from central stores out to remote districts in 2020. In summary, procurement bottlenecks – including procedural delays, capacity issues, and governance problems – severely affected budget execution, as money remained unspent when items weren't procured on time.

- **Coordination and Governance Challenges:** At the height of the crisis, the multi-sectoral nature of the response exposed coordination weaknesses. Overlapping mandates between DMMU, MoH, and ZNPHI, especially early on, caused confusion over who should spend on what. The Auditor General highlighted lack of proper coordination and clarity in roles as a problem, recommending frequent reviews of the Multi-Sectoral Contingency Plan and better stakeholder sensitisation (Office of the Auditor General, 2020). Without clear coordination, some funds sat idle awaiting decisions. For instance, donations in-kind were not optimally utilized because there were no clear guidelines or criteria for distribution of donated items at first (Office of the Auditor General, 2020). This is a governance issue – the absence of established protocols meant that even when resources were available, executing their use was inconsistent. Additionally, limited engagement of sub-national levels in planning led to slow absorption at the local level: provinces and districts sometimes got late instructions or had low capacity to implement PPR activities (e.g. training and supervising numerous community health volunteers required more coordination than initially planned).
- **Capacity Constraints and Human Resource Bottlenecks:** Implementing PPR activities at scale stretched the existing human resources and institutional capacity. The MoH had never before had to roll out an emergency program in all provinces simultaneously. Shortages of staff in procurement units, M&E, and program management meant that some funds could not be programmed or tracked properly. The World Bank PIU, for example, had to operate for a while without a full staff complement (IT specialist, etc.), which constrained project administration (World Bank, 2024). At district level, health offices often lacked dedicated finance officers to handle additional funds – so even when money was sent for, say, COVID-19 community surveillance, the accounting and reporting burden led to cautious spending or delays. Another specific HR bottleneck was high turnover and vacancies in key roles during the pandemic: the MoH saw changes in Permanent Secretaries and directors, which disrupted continuity in approvals and oversight. As noted, frontline staff incentives were also an issue – the lack of an established mechanism to pay hazard allowances initially demotivated staff (Office of the Auditor General, 2020), impacting the execution of some activities (some workers refused assignments without clarity on compensation, slowing things like surveillance in communities).
- **Off-Budget Funding Management:** While off-budget donor support was a boon, it also introduced complexity that acted as a bottleneck in its own way. The need to coordinate off-budget resources (which might come with their own timelines and conditions) with on-budget activities created delays. For example, if laboratory commodities were supplied by Global Fund but equipment was to be bought by government, any misalignment meant labs couldn't function until all pieces were in place.In addition, tracking and accounting for numerous off-budget grants (each with separate reporting) stretched ZNPHI's

administrative capacity. Without a unified financial tracking, some duplication and inefficiency occurred, with certain needs being double procured by different funding streams and other needs slipping through the cracks (each assuming the other would cover it).

- **Regulatory and Oversight Delays:** Oversight mechanisms, while crucial to prevent misuse, sometimes inadvertently slowed execution. For example, the requirement for Auditor General and Public Accounts Committee reviews of COVID-19 spending, and the subsequent investigations into irregularities, led to a more cautious approach by officials – some became hesitant to authorize spending for fear of post-audit queries. The freeze on some contracts under investigation meant funds related to those contracts stayed unspent pending resolutions. The lack of emergency-specific procurement/legal provisions meant even during a dire pandemic, officials had to follow normal protocols or risk penalties, which in some cases encouraged inaction due to fear of violating rules.

In conclusion, Zambia's difficulties in executing PPR budgets can be traced to these interlocking bottlenecks: financial rigidity, procurement hurdles, coordination gaps, capacity shortfalls, and system fragmentation. Each bottleneck reduced the speed and volume of fund utilisation. Recognizing these, both the government and partners have started working on solutions – such as revising the Public Procurement Act for emergencies, establishing the disaster trust fund, strengthening ZAMMSA's capacity, and integrating financial tracking systems – but as of 2024, these bottlenecks remain lessons learned the hard way from the COVID-19 response.

3. Recommendations

To address Zambia faces critical challenges in executing its Pandemic Preparedness and Response (PPR) budget, including underutilisation of funds, public financial management (PFM) bottlenecks, weak procurement systems, capacity constraints, and limited accountability (UNICEF, 2021). The following recommendations address these systemic issues with actionable steps, informed by recent evidence and best practices:

1. **Improve Budget Absorption and Fund Release:** Ensure that allocated PPR funds are fully utilized by releasing budgets to implementers on time and in full. Late disbursements and partial funding have been a major cause of underspending in Zambia's health sector (UNICEF, 2021). The Ministry of Finance should adopt measures such as timely quarterly transfers and allow flexibility for mid-year reallocation or carryover of unspent PPR funds, so that vital resources are not returned unused. For example, Lao PDR improved absorption by directly transferring funds for priority health programs to provinces, eliminating cumbersome approval layers and ensuring money is available when needed (Heather, 2022). Adopting similar direct funding flows (within Zambia's decentralisation framework) can remove bureaucratic delays and accelerate PPR budget execution.

2. **Strengthen PFM Systems and Planning:** Address PFM bottlenecks by modernizing budgeting practices and financial management systems. This includes fully rolling out the Integrated Financial Management Information System (IFMIS) across health agencies to enable real-time tracking of PPR expenditures and better cash management (World Bank, 2024).

Zambia should institutionalize PFM reforms that guarantee frontline health units receive operational funds on time (MOH et al., 2024)– for instance, establishing a protected PPR fund or budget line that is fast-tracked during health emergencies. Closer coordination between the Ministry of Health and Ministry of Finance is essential to implement these reforms (Heather, 2022). Moving toward program-based and outcome-based budgeting will align funds with PPR priorities and improve execution: Malaysia's transition to outcome-based budgeting overhauled rigid, input-focused processes and improved transparency through an online performance system (Heather, 2022). Likewise, Kenya's shift to program-based budgeting devolved financial control to county levels and linked spending to health outcomes, enhancing accountability and responsiveness to local needs (Heather, 2022). Zambia can adopt elements of these approaches by focusing its budgeting on PPR program results and granting more financial autonomy to provincial and district health offices with adequate safeguards.

3. **Overhaul Procurement and Supply Chain Management:** Reform procurement processes to ensure timely and efficient use of PPR funds for supplies and infrastructure. Weak procurement systems in Zambia have led to delays and value-for-money failures – for example, an investigation found that collusion and lack of oversight in Ministry of Health tenders during COVID-19 caused overpayment and loss of funds (Global Fund, 2023). To prevent such issues, the government should enforce open, competitive bidding for emergency purchases and strengthen the capacity of the Zambia Medicines and Medical Supplies Agency (ZAMMSA) to manage health procurements transparently. Introducing or upgrading e-procurement platforms can reduce opportunities for fraud and track procurement timelines. Additionally, set up an independent procurement review or audit committee for PPR spending to provide real-time oversight. These steps will streamline purchasing of critical supplies (like vaccines, medicines, and PPE) and mitigate procurement bottlenecks during health crises.

4. **Build Implementation Capacity at All Levels:** Invest in human resources and institutional capacity to execute PPR activities effectively. Inadequate financial management skills, especially at district and facility levels, hinder budget execution (UNICEF, 2021). The government should provide targeted PFM training for health managers and accountants in provinces and districts and consider deploying dedicated financial officers to high-priority PPR programs. Developing subnational financial management capacity is a critical prerequisite for successful devolution of funds (Heather, 2022). Likewise, strengthen the Zambia National Public Health Institute (ZNPHI) and emergency operations centers with the staff and tools needed to plan, absorb, and monitor PPR funds. Partnering with academic institutions or international experts to mentor local staff in areas like emergency procurement, accounting, and project management can quickly build the needed expertise. Donors and global health partners should also align their support to fill capacity gaps (for example, embedding advisors in the Ministry of Health's finance department or funding additional contract staff during public health emergencies).

5. **Enhance Accountability and Transparency Mechanisms:** Establish robust oversight to ensure PPR funds are used as intended and to rebuild public trust. This includes empowering the Office of the Auditor General and parliamentary committees (e.g. Public Accounts Committee) to regularly audit PPR expenditures and follow up on findings. Audit results and budget execution reports should be published publicly to promote transparency. Zambia's recent experiences underscore the need for stronger checks: ineffective controls in procurement allowed collusion that went undetected (Global Fund, 2023), and stakeholders have perceived COVID-19 resources to be lost to corruption in some cases (Chibwili, 2024). To counter this, the government can create a multi-stakeholder PPR oversight task force (including civil society and donor representatives) to monitor implementation of pandemic funds in real time. Greater citizen engagement – for instance, public dashboards on PPR fund allocations and outcomes – will foster social accountability. Kenya's experience shows that informing the public about funded health programs and enabling their participation can hold officials accountable to program targets (Heather, 2022). By instituting clear consequences for misuse of funds and rewarding good performance (such as timely completion of PPR projects), Zambia can cultivate a culture of accountability that safeguards every kwacha dedicated to health security.

4. Conclusion

In conclusion, improving PPR budget execution in Zambia is urgent and achievable. The country must address its fund absorption gaps, PFM inefficiencies, procurement weaknesses, capacity shortfalls, and oversight deficiencies to strengthen health system resilience and preparedness. By implementing the above recommendations – drawn from evidence and best practices in Zambia and comparable settings – the government and its partners can ensure that allocated resources translate into timely pandemic preparedness on the ground. These reforms will not only reduce waste and underutilisation of funds but also accelerate the deployment of critical health services during crises, thereby bolstering Zambia's health security and its ability to protect citizens in future outbreaks. The momentum to act is now, before the next pandemic strikes, to solidify a robust and accountable PPR financing framework for Zambia's sustainable health emergency response come.

5. References

Africa Centres for Disease Control and Prevention. (2025). *Africa's health financing in a new era: innovative financing mechanisms*. Addis Ababa: Africa CDC. Retrieved from https://africacdc.org/download/africas-health-financing-in-a-new-era-april-2025/

Bednar, H. S., Adeboyejo, R., Sidibe, T., Powell, R., Monroe, J., Mmanywa, M. S., & Zeramula, L. T. (2023). Building Global Health Systems Capacity During COVID-19 to Improve Vaccination Access and Reduce Hesitancy: Case Studies in Zambia and Tanzania. *Health Security*, 341–346. Retrieved from https://doi.org/10.1089/hs.2023.0004

CCM Zambia. (2025). *The Covid-19 Components*. Retrieved from https://www.nac.org.zm/ccmzambia/the-covid-19-components/#:~:text=Since%20the%20beginning%20of%20the,19%20Response%20Mechanism%20%28C19RM

CDC. (2024). *CDC Investments in Public Health Programs Help Zambia Respond to COVID-19*. Retrieved from https://archive.cdc.gov/www_cdc_gov/globalhealth/video/transcripts/003-CDC-Investments-Public-Health-Programs-Help-Zambia-Respond-Covid-19_transcript.html#:~:text=program%20is%20an%20important%20program,address%20emerging%20public%20health%20threats

Chibwili, E. (2024). *AD755: Zambians laud government's response to COVID-19 but believe resources lost to corruption*. Retrieved from https://www.afrobarometer.org/publication/ad755-zambians-laud-governments-response-to-covid-19-but-believe-resources-lost-to-corruption/#:~:text=,relief%20assistance%20was%20distributed%20unfairly

Chitah B. (2022). *Health sector financing and COVID-19: East and Southern Africa trends and a Zambia case study* (Discussion Paper 124). Harare. Retrieved from https://equinetafrica.org/sites/default/files/uploads/documents/EQ%20Diss124%20Health%20fin%20%20and%20COVID%20%20Jan2022.pdf

Chitah, B., Chansa, C., Kaonga, O., & Workie, N. (2018). Myriad of Health Care Financing Reforms in Zambia: Have the Poor Benefited? *Health Systems & Reform*, *4:4*, 313–323. Retrieved from https://doi.org/10.1080/23288604.2018.1510286

Eric Mwanza. (n.d.). *USA Increases Financial Support to Zambia, Provides US$1.87 Million COVID-19 Financing*. Retrieved from https://www.zambiaembassy.org/article/usa-increases-financial-support-to-zambia-provides-us187-million-covid-19-financing#:~:text=USA%20Increases%20Financial%20Support%20to,19

GHI. (2021). *Advancing Collective Action And Accountability Amid Global Crisis*. Retrieved from https://ghsindex.org/wp-content/uploads/2021/12/2021_GHSindexFullReport_Final.pdf

Global Fund. (2023). *Investigation Report Global Fund Grants in Zambia Collusion in a 2020 COVID - 19 Procurement*. Retrieved from https://www.theglobalfund.org/media/13569/oig_gf-oig-23-022_report_en.pdf#:~:text=It%20uncovered%20that%20the%20granular,measures%20to%20mitigate%20the%20risks

Heather, V. (2022). *Lessons from Three Countries That Have Strengthened Budget Structures and Processes to Improve Health Budget Execution*. Retrieved from https://lhssproject.medium.com/lessons-from-three-countries-that-have-strengthened-budget-structures-and-processes-to-improve-b2717db7b88f#:~:text=In%20Lao%2C%20the%20government%20adopted,ensure%20funding%20is%20available%20when

Lusaka Times. (2022). *Government allocates over K930 million for Recruiting Health Workers*. Retrieved from https://www.lusakatimes.com/

MOH. (2024). *Zambia National Health Strategic Plan 2017 – 2021*. Retrieved from https://www.moh.gov.zm/?wpfb_dl=3

MOH, & WHO. (2024). *Health Financing Progress Matrix Assessment Zambia 2024 Summary of findings and recommendations*. Retrieved from https://www.afro.who.int/sites/default/files/2024-08/HFPM%20Zambia%202024.pdf#:~:text=Budget%20execution%20has%20not%20been,funds%20according%20to%20budget%20commitments

Mudenda, S., Chileshe, M., Mukosha, M., Hikaambo, C., Banda, M., Kampamba, M., Mwila, K., Banda, D., Mufwambi, W., & Daka, V. (2022). Zambia's Response to the COVID-19 Pandemic: Exploring Lessons, Challenges and Implications for Future Policies and Strategies. *Pharmacology & Pharmacy*, *13*, 11–33. Retrieved from https://www.scirp.org/journal/paperinformation?paperid=115052

National Assembly of Zambia. (2022, March 15). *The House met at 1430 hours*. Retrieved from https://www.parliament.gov.zm/node/10098#:~:text=Tuesday%2C%2015th%20March%2C%202022%20,of%20Health%20will%20increase

Office of the Auditor General. (2020). *Interim Report Of the Auditor General On The Audit Of Utilisation of Covid-19 Resources*. Retrieved from https://acazambia.org/wp-content/uploads/2023/10/COVID-Report-2020_2.pdf#:~:text=b,cash%20in%20amounts%20totalling%20K12%2C922%2C755

Open Zambia. (2020). *Audit Uncovers COVID-19 Fund Irregularities*. Retrieved from https://www.openzambia.com/economics/2020/11/3/audit-uncovers-covid-19-fund-irregularities#:~:text=to%20a%20specific%20supplier%2C%E2%80%9D%20Dr,Sichembe%20revealed

Pandemic Fund. (2025). *Multisectoral Pandemic Preparedness and Response Project*. Retrieved from https://www.thepandemicfund.org/projects/ZAMBIA-multisectoral-pandemic-preparedness-and-response-project#:~:text=and%20rapidly%20respond%20to%20public,financing

UNICEF. (2021). *2020/2021 Health Budget Brief : Budgeting for Health during Pandemics*. Retrieved from https://www.unicef.org/zambia/media/2491/file/Zambia-budget-brief-2020-2021-health.pdf#:~:text=Despite%20having%20supplementary%20budgets%2C%20the,the%20credibility%20of%20the%20health

UNICEF. (2022). *Health Budget Brief: Sustainable financing of healthcare delivery*. Retrieved from https://www.unicef.org/esa/media/11336/file/UNICEF-Zambia-Health-Budget-Brief-2022.pdf#:~:text=reduction%20of%20the%20high%20rates,mix%20to%20reduce%20dependence%20on

World Bank. (2021, June 29). *World Bank Approves $24 Million to Support Zambia with COVID-19 Vaccines*. Retrieved from https://www.worldbank.org/en/news/press-release/2021/06/29/world-bank-approves-24-million-to-support-zambia-with-covid-19-vaccines#:~:text=Of%20the%20total%20amount%2C%20%2414,new%20IDA%20grant%20brings%20the

World Bank. (2023). *Pandemic Fund Allocates First Grants to Help Countries Be Better Prepared for Future Pandemics*. Retrieved from https://www.worldbank.org/en/news/press-release/2023/07/20/pandemic-fund-allocates-first-grants-to-help-countries-be-better-prepared-for-future-pandemics#:~:text=Pandemic%20Preparedness%20and%20Response%20through,a%20One%20Health%20Approach

World Bank. (2024). *Zambia COVID-19 Emergency Response and Health Systems Preparedness Project (P174185) Implementation Support Mission March 18 – 22, 2024 Aide Memoire* . Retrieved from https://documents1.worldbank.org/curated/en/099082524113535943/pdf/P1741851794cda0721896b1b800959624d5.pdf#:~:text=disbursed%20US%2424,of%20the%20accounting%20software%20was

ZNPHI. (2022). *Annual Progress Report*. Lusaka. Retrieved from https://w2.znphi.co.zm/resources/

ZNPHI. (2023). *Annual Report*. Lusaka. Retrieved from https://drive.google.com/file/d/1ylAO_QzibnYyC1e1hul7a1vWX7q1tC3_/view

Authors

Douglas Mushinge[1], Lukundo Simwinga[1], Oliver Kaonga[1], Mary Mwami, Victor Kidake, Jackson Otieno, Rose Oronje

AFIDEP
African Institute for Development Policy

GLOBESOLUTE
Innovating for Global Impact