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ASSESSING THE EXPERIENCES OF PUBLIC-PRIVATE PARTNERSHIPS IN CLINICAL SERVICES WITHIN THE HEALTHCARE SECTOR: AN EXPLORATORY QUALITATIVE STUDY IN ADDIS ABABA

BY

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Acronym and Abbreviations

AACAHB: Addis Ababa City Administration Health Bureau

AEFI: Adverse Event Following Immunization

AIDS: Auto Immune Deficiency syndrome

AKI: Acute Kidney, Injury

BOPV: Bivalent Oral Polio Vaccine

CBHI: Community-Based Health Insurance

CHAI: Clinton Health Access Initiative

CKD: Chronic Kidney Disease

CCE: Cold Chain Equipment

DOTS: Directly Observed Treatment, Short-Course

DHIS2: District Health Information Software 2

EFDA: Ethiopian Food and Drug Administration

EHIS: Ethiopian Health Insurance Service

EPHI: Ethiopian Public Health Institute

EPI: Expanded Program on Immunization

EPSA: Ethiopian Pharmaceutical Supply Agency

ESRD: End Stage Renal Disease

FT: Fixed Time

HBsAg: Hepatitis B Surface Antigen

HCW: Health Care Worker

HIV: Human Immunodeficiency Virus

IDC: Integrated Diagnostic Center

ICU: Intensive Care Unit

KPI: Key Performance Indicators

MMOL/ L: Millimoles Per Liter

MOF: Ministry of Finance

MOH: Ministry of Health

MOU: Memorandum of understanding

NGO: Non-Governmental Organization

PCV13: Pneumococcal Conjugate Vaccine

PHF: Private Health Facility

PHSP: Private Health Sector Program

PPM: Private-public mix

PPP: Public-Private Partnership

REC: Review Ethics Committee

RO: Reverse Osmosis

TASH: Tikur Anbessa Specialized Hospital

TB: Tuberculosis

TWG: Technical Working Groups

UI: Under Immunized

VPD: Vaccine-preventable disease

VRF: Vaccine Requestion Form

WHO: World Health Organization

WHO PQS: WHO performance, quality, and safety process to prequalify medical devices

ZD: Zero Dose

Abstract

Background: Ethiopia is amid reforms targeting public assets for privatization, this presents an interesting timeline for the public health sector to leverage the abilities of the dynamic Ethiopian private sector in providing quality health care. One strategy for accomplishing that aim is the implementation of innovative and novel health financing mechanisms such as public-private partnerships (PPPs). However, there is limited evidence and a weak understanding of public-private partnerships within the healthcare sector, impeding effective implementation. Furthermore, the challenges and opportunities associated with implementing public-private partnerships remain largely unexplored, hindering knowledge and awareness of their potential benefits and risks.

Objective: This study aims to assess the experiences of private-public partnerships in healthcare services in Addis Ababa, by examining the implementation processes of private-public partnership projects, and by identifying the main challenges and opportunities to inform future engagement.

Methods: The study was conducted on three public-private partnership projects: the Ye Ab dialysis unit, the Clinton Health Access Immunization Program, and the Integrated Diagnostic Center within Addis Ababa. The projects were selected because of their variability to reflect the vast nature of Public-private partnerships. The study period was from February 1, 2025, to March 18, 2025. An Exploratory study design with a qualitative method and a hybrid approach was conducted to assess stakeholders' experiences. Data was collected using semi-structured informant interviews and was analyzed thematically.

Results: This study has identified the implementation process and intended implementation process of the selected PPP projects in terms of planning, procurement, execution, monitoring, and evaluation. Additionally, it has identified several challenges and expected challenges such as coordination issues, capacity gaps, resource constraints, and limited technical expertise that affected service provisions. Conversely, opportunities and good practices and expected ones, such as resource mobilization, capacity building, and innovation & efficiency, were identified.

Conclusions: Agreements involving the private and public sectors require synchronicity and working in tandem by each party. The private sector should be aware of the contexts and facts on the ground before engaging in terms with the public sector. The public sector should be amenable to unforeseen challenges, as that is a central issue that affects the lifetime of a project.

1. Introduction

1.1. Background

Public-private partnerships (PPPs) have come into discernible view globally as paradigm-changing answers to limited and deteriorating health access (1,2,3). The complexity of PPPs requires adaptation to the problem they intend to solve and mandates a multifaceted and layered examination (3,4). This needs to be cognizant of the interests of the parties involved, guaranteeing a viable approach that includes decision-making authority and fostering accountability (3,4). The Ethiopian public sector faces severe problems in providing quality and accessible healthcare to citizens due to its overstretched state. The private sector is expanding at unprecedented levels, warranting a collaboration structure to solve that issue (1). Despite this context, a key question remains regarding the viability and sustainability of such initiatives. Recently, the country has shown a pivot towards the private sector to address a spectrum of problems and inefficiencies within various public sectors (1). Within this context, the role of public partnerships in addressing critical issues the nation faces is ever more important. In past years, the healthcare landscape within the country has become more conducive to considering the possible advantages of working with the private sector. There is an increase in the government's willingness to engage in health PPPs. The Ministry of Health has an objective of establishing at least one public-private partnership (PPP) per year. It has also strategized among its 14 strategies for the implementation of PPP as a key initiative (1).

The PPP policy framework has emphasized that the country has acknowledged the link between access to improved social infrastructure and economic development and growth. Access to investment is especially important to have larger access and coverage for the Ethiopian people in social infrastructures such as health (1,12). The framework stated that the Ethiopian growth and transformation plan, as part of its seven strategic pillars, envisages the strengthening of social development in health. With this respect, it has been committed to creating affordable, sustainable projects that are in the public interest, where they bring considerable benefits (1,12). Institutional capacity is seen as a key element of this arrangement where potential private sector engagees must fulfill their contractual obligations and their performance needs monitoring to merit success. Structures were established within the Ethiopian government to aid in the successful execution of PPP initiatives. A PPP board was set up to grant approvals for projects considered economically advantageous, and a dedicated PPP unit in the Ministry of Finance to

help in procurement and project budgeting. This shows that the environment is evolving to be conducive to engagement (1,12).

1.2. Statement of the problem

The Ethiopian private sector accounts for 92.6 % of Out-of-pocket spending according to the national health account report 2019/2020 (2). This shows how the private sector is expanding at an unprecedented rate encouraging the government to look at possible collaborative ventures such as public-private partnerships in addressing the country's health woes.

Private-public partnerships have been shown globally to address access, quality, and cost issues within multiple low-income, middle-income, and high-income countries, emphasizing their need for implementation (3,4). Unfortunately, the Ethiopian healthcare sector has struggled to create sustainable and long-term successes to benefit in the same way as global examples, leading to missed opportunities (5,6). According to the health sector transformation plan, there is a gap in key health system blocks, such as financing and, by extension, PPPs due to a poor evidence-based decision-making strategy. The root cause of these gaps has been poorly explored or known, leading to financing an integral part of a functional health care system inadequately addressed.

The literature on PPPs within Ethiopia is also severely limited to cases of non-transactional PPP projects, meaning projects that are non-contractual and lacking payment for services provided (7,8). This limits what is known about PPP cases involving financial transactions and contractual service delivery. Without a concerted exploration of such services, continued sustainability, viability, and future implementation of future projects are threatened. The Ministry of Health in the health sector development and transformation plan has also stated engaging private donors with a special focus on engaging diaspora Ethiopians to help in PPP projects as an initiative, there is no current literature in the context of this subject matter to assess what has been learned with such engagements. This lack of literature obstructs awareness of the intended stakeholder's capabilities of managing such services.

Furthermore, the Ethiopian National Health Account showed that the health financing system is dependent on external sources and that government spending on health, despite its growth, is still low. Showing the need to adequately explore donor-funded projects. Donor-funded shares have risen from USD 1.09 billion in 2016/17 to USD 1.23 billion USD in 2019/20 and accounted for 34% funding higher than other lower-income countries which stand at 30% (2). The National Healthcare Financing Strategy states that diagnostic services are a priority area

for exploration within a PPP context, there has also been no literature on this subject matter, affecting knowledge and awareness of a centrally driven PPP project within the country. The PPP board's involvement with the project is essential in understanding the future trajectory of PPP projects in the health sector (1,7,30). This study aims to explore the state of PPP projects within the country in light of their significance as a strategic initiative as stated by the national health financing strategy. This approach can generate tangible evidence to aid in the decision-making structure as well as critically evaluate the public-private engagement structures established within the healthcare system.

1.3. Rationale and significance

The healthcare sector can stand to benefit from the utilization of private actors for services to see palpable increases in quality, accessibility, and efficiency. The Ethiopian public sector suffers from overstretched capacity and burden due to the sheer size of the growing population. To further compound the problem, the country's population is expanding at unprecedented levels, impeding the public sector's ability to cope. Additional challenges remain, where the country is rapidly transitioning to non-communicable diseases, requiring a complete reroute for the country's health systems, which have been geared to address communicable diseases by default. Additionally, the retention of highly qualified and competent healthcare professionals is also under threat due to the overstretched status of the health system. All these underlying issues within the Ethiopian healthcare sector necessitate engagement with Ethiopia's expanding and dynamic private sector.

With the above-stated reasons, it is more imperative than ever to engage the private sector to address issues within the healthcare sector, one key area in this regard is private partnerships. Leveraging the regulatory power of the public sector and its role as a purveyor of the interests of the public, and the efficiency and expertise of the private sector. PPPs within health are at an infancy stage, not just in Ethiopia but globally. Targeted research might provide tangible insights into this ever-evolving area, informing a possible growth model for the healthcare sector. This study aims to assess the experience of public-private partnerships within clinical services. As the research topic is fairly new, it stands to help in policy crafting to ensure an integrative approach and to inform perceptions in such arrangements. Moreover, the challenges of the PPP projects will be identified to inform future health facilities, the Ministry of Health, and other stakeholders so that strategies tailored to address the challenges are developed. Good practices that emanate will also help in sustainability and replicability efforts. The study also

aims to provide researchable topics for future researchers to further investigate how to effectively utilize these arrangements.

2. Literature review

2.1. Theoretical review

The World Bank defines a public-private partnership (PPP) as a *long-term contract between a private party and a government entity for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance* (11).

PPPs have a lot of strong suits that they bring to the table, one of them being skills and knowledge. They help with risk sharing and provide access to transparency and accountability, and finally, the efficient provision of services. Another important benefit of PPPs is their ability to provide value for money for the consumer or contracting authority, or in other words, a net gain for the consumer or contracting authority in a variety of matrices such as cost, price, quality, and quantity (12).

Additionally, PPPs in health provide a significant link in improving prognosis, meaning the diagnosis of a disease, access in terms of having a health facility present and conveniently near the target population, and Coverage in terms of vast sectors of the society being within reach of said services (9,10).

Despite their numerous benefits, as implied above, the real-world implementation of PPPs depends on the public sector and its ability to conjure a successful execution scheme. This further depends on how contracts are defined, the evaluation and monitoring of performance, and finally, the imposition of penalties when performance is below expectations set. The public sector should also be cognizant that any private provider willing to undertake such projects for a sustainable period needs access to efficient capital markets. This is best realized when there is a wide scope of understanding that surrounds the private sector, its goals, and its ability to best handle risks, bringing about added benefits of efficient regulation and control, proper distribution of resources, and an air of accountability and transparency for both parties (13,18).

Within these arrangements, the role that many non-governmental organizations play has shown a considerable increase, and their involvement is expanding; they play a crucial role and have numerous advantages they bring to PPPs. They provide multiple benefits such as flexibility, knowledgeable people, creative ideas, and legitimacy. Their role is particularly important in lower-income countries like Ethiopia. The country intends to leverage PPPs and their abilities to address the various healthcare gaps and weaknesses within the realms of infrastructure, investment in equipment, abilities of critical HCWs, and most importantly, access for its citizens (9,16,31).

2.2. Empirical Overview

The experiences healthcare systems have with PPP globally are relatively new. This is most evident within the context of low and lower-middle-income countries. The first countries that started the application of this model were Western European countries like the United Kingdom and the United States (17). Despite their novelty, PPPs have reported efficient service provision, especially within diagnosis and therapy. They have shown a lower duration of stay for patients and a general reduction in prevalence, incidence, and most importantly, mortality (14,18).

Their potential benefits do not just stop with better prognosis; they were also noted to provide better coverage and access to patients unable to access public facilities. This has been observed in lower-middle-income countries like India, Bangladesh, and Pakistan (19,21,22).

Other literature also noted the potential of PPP to effectively provide access to UHC for multiple sub-Saharan African countries. Despite this fact, within the context of Africa, the overall assessment of PPP has also been noted as relatively lacking. This issue is mostly evident, especially within sub-Saharan African countries. Research conducted within Lesotho reported a mixed result with PPP; they were shown to provide service to regional standards, but the clinical outcome they provided showed that these could have been due to a process of facility accreditation and not to the PPP process itself (25,26).

Experiences of Malawi with PPPs also noted several critical challenges. These challenges were cost escalation, lack of clear guidelines, lack of qualified HCWs, and the lack of a system to monitor performance. In contrast, PPPs have also shown importance in fostering the training of often critical HCWs, enabling care provision. In countries like Kenya, there has been a notable improvement in maternal and child health outcomes because of this collaboration. The decentralized nature of the Kenyan healthcare system is important in the country's health

financing strategy, significantly empowering lower government structures to implement what best fits their particular needs (22,27,28).

PPPs are emerging globally as an important cornerstone of a functional healthcare system, but face several challenges. Because of their multilateral nature, the most prominent issue they face is that they require regulation. PPPs that are not regulated effectively often value profits over the well-being of vulnerable patients. This can also be expanded to include groups that are not in urban areas and low-income groups, which leaves these groups exposed to further healthcare challenges (29).

2.3 Ethiopian Context

Nationally, the concept of PPP is also an exceedingly new phenomenon in line with other countries' trajectories. The Ethiopian government crafted a proclamation in 2017 recognizing the need to engage and create a conducive environment for PPP initiatives in multiple sectors, including health. This underscored its increasing importance to the country and its development. Key timelines for the policy include adoption as a policy in August 2017, ratification by the parliament as a proclamation (no.1076/2018) in February 2018, the development of a directive in July 2018, and finally the establishment of a PPP directorate within the MOF in 2019 (30).

The generic guideline developed by the MOF specified what qualifies as a PPP project on a federal level, with key definitions for often mixed-up terminologies. PPP types such as service and management contracts, concessions, long-term leases, design/build/operate and transfer, and privately owned and developed infrastructure were identified as categories. Where each has an associated risk that is shared between the public and private sectors. Management contracts are deemed as where the public sector has the least risk, followed by concessions, long-term leases, design/build/operate and transfer, and finally, privately owned and developed infrastructure has the most risk for private providers (30). The guideline further distinguishes what qualifies as a PPP in terms of the roles and responsibilities of various public sector organizations. According to the guideline, a public entity is publicly owned and funded by the public sector. A public enterprise is understood to be a publicly owned but self-funded entity. If there is a hypothetical PPP engagement, public enterprises are deemed as a contracting authority, and public entities might be a counterpart to the agreement (30).

Compensation terms were also highlighted and included three types: user pay PPPs, public payment PPPs, and a hybrid form. User pay PPP, as the name indicates, was set to be paid by

the service users. Whereas public payment PPP is compensation that the contracting authority would pay to the private sector. Finally, a hybrid form included a mixture of both. Finally, the guideline distinguishes between traditional procurement and PPP in terms of risk, project management, funding, financing, and value for money, and their distribution between the public and private sectors. Under this, a PPP is characterized by the fact that there is equal distribution of risk, that the private sector is responsible for the management, and payment is based on performance levels (30).

Within the health sector, a PPP strategic guideline was developed in 2013 and an implementation guideline in 2017 by the MOH. Both underscored the perceived benefits of PPP arrangements in health in areas such as addressing issues of lack of capacity and technical efficiency in the provision of care and resource constraints. It also noted the key role of PPP in bringing additional resource mobilization and bringing innovation and efficiency to the healthcare sector (9,31). Currently, PPP initiatives within the healthcare sector in Ethiopia are under the MOH strategic affairs directorate, where there is a dedicated financing and public-private partnership team.

Within the healthcare sector, the country has prior experience with non-transactional PPPs in PPM-DOTS, EPI, and family planning. These projects were conducted in various regions and city administrations such as Addis Ababa (8,9,31). Non-transactional PPPs are characterized by the lack of a formal contract or user fees and usually involve strengthening health systems via policy implementation. Challenges faced include the absence of an incentive for private providers and a lack of regulatory or legal framework, issues of mistrust and coordination between the private and public sector and technical issues in reporting data especially in EPI services due to associated workloads (8,9,31).

These PPP engagements are not covered under the PPP directive because they lack a transaction. A decentralized dialysis unit at Ayder Hospital in Mekelle was also operational, emanating from the hospital's internal administrative structure without central government engagement. This issue was cited as a hindrance to the unit and its functionality. Prior projects in dialysis provision and eye care have failed due to lack of capacity, monitoring, and resource constraints (5,6,32).

The literature examined has noted the infancy of PPP arrangements within health sectors internationally, locally, and in countries within different income brackets. PPPs are critical in quality, access coverage, and capacity building but require extensive control due to rampant

cost escalations, regulations, and choosing the right private provider. The Ministry of Finance has developed guidelines but there is a concerted gap in understanding PPP projects concerning the distinct project instigations. This has led to poor outcomes and poor execution of several past endeavors. This is because of the several types of PPPs available and their lack of acknowledgment due to the centralized nature of PPP initiatives. The challenges faced, good practices, and lessons learned are poorly documented because of fragmentation. There is a significant gap in understanding these health financing dimensions within the healthcare sector. This research aims to help decision-makers explore possible avenues of success and failure. The Exploratory nature of the thesis is intended to posit multiple questions that can be researched individually for future researchers in the area.

2.4 Conceptual framework

This study has an exploratory research design and hence does not have independent and dependent variables. The framework is structured around the perspectives and subjective experiences of the participants involved. The framework is based on 3 themes that emerged from the literature reviewed and the study's objectives, and 11 sub-themes that emerged from interviews with the participants. The 3 themes are the PPP implementation process, challenges in implementation, opportunities, and good practices. The PPP implementation process theme explains study participants' experiences through the various stages of the projects (30). The challenges in implementation theme explain obstacles stakeholders faced (31, 22,37). Conversely, the opportunities and good practices theme reflects positive experiences (14,18,19).

The framework's relationships between the concepts that emerged are that the implementation process is the structure where stakeholders function. The challenges negatively affect the implementation process and stakeholders' experiences and perceptions. The opportunities and good practices positively influence the process and address the challenges. The stakeholders' experiences emerge from the relationship of these concepts and provide feedback to the implementation process in turn.

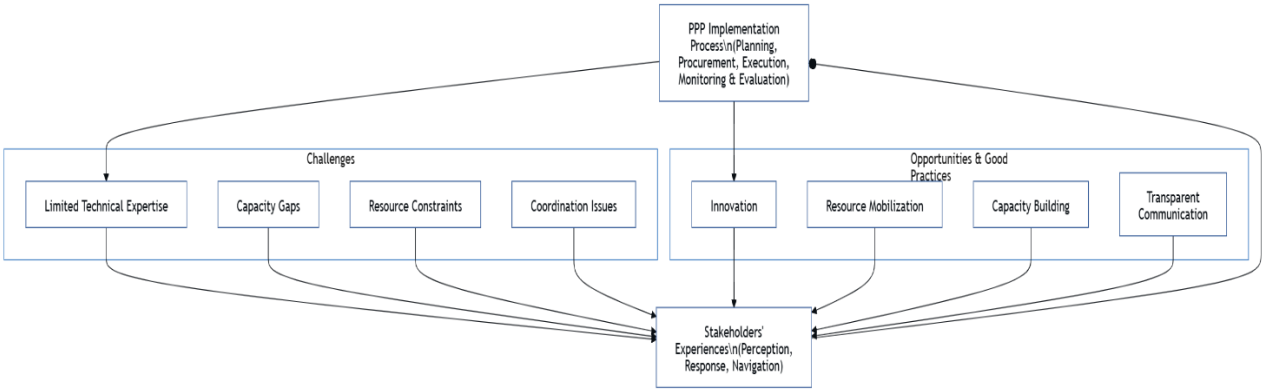

Figure 1: Conceptual Framework for understanding stakeholder experiences in PPP within the Health Sector

3. Objectives

3.1.General objective of the study

The general objective of the study is to assess the experiences of public-private partnerships within the health sector in Addis Ababa.

3.2.Specific Objectives of the Study

The specific objectives of the study are :

- To identify the implementation process of selected public-private partnership projects in the health sector in Addis Ababa;
- To identify the challenges faced in the implementation of selected public-private partnership projects within the health sector in Addis Ababa;
- To identify the good practices and opportunities in selected public-private partnership projects within the health sector in Addis Ababa.

4. Methodology

4.1.Study Area

Addis Ababa is the capital and largest city of Ethiopia. As the largest urban area in the country, the city is, was, and intended to become home to multiple PPP initiatives (1). For this reason, it serves as a good location to assess the PPP phenomena as well as serve as a blueprint region for further implementation nationwide.

An exploratory study was conducted on three PPP projects. A key informant interview was done with 9 participants from the private providers, NGO's, a PHF manager, and 2 public officials from the Addis Ababa Health Bureau were asked about the extent of PPP projects within the city as of the data collection period of this research. A semi-structured open-ended questionnaire was used to assess the experience in the process, challenges, and opportunities of PPP projects within the city.

4.2.Study period

The study was conducted from February 9^{th,} 2025 to March 20^{th,} 2025.

4.3.Study design and approach

An exploratory study research design was used to assess the experience of the informants. A qualitative method with both a deductive for the themes and inductive approach for the sub-themes was applied to gain deeper insight as this is an area that lacks research and requires themes to emerge from participants for further future researchable hypothesis and questions.

4.4 Source population

Individuals who were involved in and had an understanding of PPP projects were the source population of the study.

4.5. Study population

The study population was composed of participants who worked at Ye Ab dialysis unit in Menelik II specialized comprehensive hospital, public sector officials from the Addis Ababa health bureau, individuals from an NGO called CHAI, and a PHF manager under the CHAI project. There were a total of 9 participants.

4.6.Recruitment of participants

A snowball and purposive sampling strategies were used to recruit the study participants, as some of them are diaspora Ethiopians. Participants were referred to by the first participant interviewed and the process was repeated to reach saturation until new themes stopped

emerging. In the case of the Ye Ab dialysis unit. Other participants were recruited based on the diversity of their projects as much as possible to explore the unique and different experiences each might have related to the activities of the PPP projects they were engaged in.

4.7.Data collection and procedures

A total of 9 participants were interviewed. Interviews consisted of 6 face to face interviews and 3 interviews over the phone as some of the participants are diaspora Ethiopians. The primary investigator conducted interviews. An open-ended guide was developed as the research was exploratory to not cause a limitation to the number of themes that participants were willing to discuss. Interviews were conducted in the English language. Five interviews were audio recorded and four were not as some participants did not consent to the recording of their voices due to the sensitive nature of the topic. Interviews took an average of 45 minutes. Furthermore, data was also collected in the form of publicly available literature on the subject matter and document review.

4.8.Quality assurance

The validity of qualitative research is an essential element in maintaining rigor. Validity is reliability, and generalizability in qualitative research (35). It covers essential tools, processes, data, and their appropriateness. To confirm the study's validity data triangulation was employed this included using data from different periods, spaces, and people. Another essential element of validity is the use of audit trails of materials. During interviews field notes and personal memos were kept to have a clear description of the path taken in the research period. Respondent validation or member checking is another essential element to corroborate validity (36). Study participants were asked to corroborate key findings to ensure an accurate description of themes. Interview transcripts were sent to respondents to check accurate transcription. Reliability refers to the replicability of results, this can be confirmed using inclusivity of deviant cases. This is when data sets do not conform to the common patterns that emerged during analysis (37). This was used to avoid bias and assumptions and get a better understanding of the complex nature of the research topic. This was achieved by using audit trails where negative cases were documented in field notes and memos.

4.9.Data processing and analysis

Audio recorded data was transcribed verbatim, for those that weren’t recorded verbatim transcription was typed down manually using a laptop during the interview periods. Informants

were asked to repeat unclear sections. A codebook was developed using the thematic inductive approach to ensure themes come up naturally from the data without a predetermined codebook. Field notes and memos were kept during interviews to keep track of data and ideas that might emerge during the interview. Atlas ti software was used to analyze data. Thematic analysis was used to analyze the themes and sub-themes that emerged during the interviews and organize them.

Table 1: Main themes and sub-themes, and codes

No.	Main Themes	Description	Sub-themes	Codes
1.	**Implementation process**	Steps taken in initiation, including: contents, key guidelines and contracts, rationale, actors, and individuals involved during a project's lifetime.	1. Planning 2. Procurement 3. Execution 4. Monitoring & evaluation	Nature of the organization/actors Key timeline of events/timeline Objectives, Contract terms , Responsibilities in staff and service provision, Implementation plans, Contextual factor
2.	**Challenges in implementation**	Roadblocks a project faces during its lifetime.	1. Coordination issues 2. Capacity gaps 3. Resource constraints 4. Limited technical expertise	Refrigeration issues, conflict impeding vaccine distribution printable materials, data reporting issues, knowledgeable healthcare workers, effective communication overregulation, cost escalation volume of samples
3.	**Good practices and opportunities**	Positive aspects of a project, and some are worth replicating.	1.Innovation&efficency 2.Resource mobilization 3.Capacity building	Forum establishment,linkage establishment,the ability of public institutions,community engagement,utility provision and physical space,establishment of a referral network,cross-subsidization,transparency and accountability

4.10. Ethical considerations

Ethical approval was given by the Addis Ababa University College of Health Sciences, School of Public Health REC to conduct the research. Before the interviews were conducted all participants were informed about the research, its aims, and its goals and asked for their consent to participate in the research. Furthermore, all participants were asked beforehand if they were

comfortable with their audio recordings of the interviews. Confidentiality was maintained by removing all personal identifying information from the interview transcriptions.

4.11.Dissemination of Findings

The findings of the study will be submitted and presented to the Addis Ababa University School of Public Health, Addis Ababa City Health Bureau, and other concerned bodies. Attempts will be made to publish the results in reputable journals and communicate findings to the scientific world.

5. Findings

5.1 Study Participants Characteristics

The participants have diverse backgrounds working in various public, private, and non-profit institutions. Three were ye ab employees, three were from CHAI and one was a PHF manager under the CHAI program. Public officials from the Addis Ababa city administration health bureau were asked about the extent of projects within the city.

Table 2: Characteristics of Study Participants

Code	Position (role)
P1	ye ab employee
P2	ye ab employee
P3	ye ab employee
P4	Addis Ababa health bureau representative
P5	Addis Ababa health bureau representative
P6	CHAI representative
P7	CHAI Representative
P8	CHAI Representative
P9	PHF Manager

Table 3: Distribution of defunct and future PPP projects within Addis Ababa

Distribution of defunct and future PPP projects within Addis Ababa				
PPP project	**Payment structure**	**Area of focus**	**Status**	**Facility location**
OIA Eye Care Center	Transactional PPP	Eye care	Failed	Zewditu memorial hospital
Ye Ab Dialysis unit	Transactional PPP	Provision of dialysis services	Failed	Menelik II specialized comprehensive hospital
Integrated diagnostic center	Transactional PPP	Laboratory and Pathology services	Yet to begin services, the bidding and negotiation stage.	Saint peter's Specialized hospital
CHAI Non-transactional PPP project in immunization	Non-transactional PPP	Expanded program on immunization	assessment ended in 2022 and then progressed to handover to Addis Ababa RHB, currently in progress.	Currently, 57 PHF facilities are giving RI services post CHAI handover in all 11 sub-cities
Oncology center	Transactional PPP	Oncology services	The facility is built but has yet to begin services	Saint Paul's Hospital
USAID PHSP project	Non-transactional PPP	PMTCT PPM DOTS RMNCH services	The project phased out in 2020, supported various PHFs within Addis Ababa and other regions of Ethiopia.	Exact amount of facilities unspecified by participants

Based on the identified PPP projects presented above, three projects were selected to encompass the general trends within the healthcare scene in the city based on their patterns of initiation. A pattern in the structure of initiation of each project was identified where some projects were non-transactional (PHSP& CHAI project on immunization), and others were not (Ye ab dialysis unit, OIA eye care center). Another pattern was identified where there were centrally driven PPPs. Meaning those initiated by the tacit approval of the PPP board (integrated diagnostic center and oncology center). Based on the identified patterns all of the projects assessed have different starting points to encompass the complex nature of PPPs within Addis Ababa and the Ethiopian healthcare sector in general. The projects were the Ye Ab Dialysis unit selected because of its lack of a PPP profile from the MOF and its somewhat decentralized nature. The CHAI project in immunization is included because of its non-transactional nature, as the Ethiopian healthcare sector has more experience in such arrangements as opposed to transactional PPPs. The integrated diagnostic center was selected because of its central decision-making structure and alignment with the Ethiopian PPP Proclamation 1076/2018. The Implementation processes for each selected PPP case were then explored and assessed for the study.

During the discussions, three themes emerged from the informants these were process, challenges in implementation, and opportunities & good practices. The implementation process theme is where informants describe the contextual factors necessitating their projects, the contents of their respective projects, monitoring tools, and key timelines that emerged in relation to the steps taken in each project. It had a total of 4 sub-themes emerge. The challenges in the implementation theme was where failures and significant roadblocks encountered were detailed. This theme had a total of 4 sub-themes. Finally, the opportunities and good practices theme where positive and replicable accounts were detailed emerged and it had a total of 3 sub-themes. Each theme for the most part was unique for each project and thus is presented separately for each PPP project.

5.4 Implementation process for the hemodialysis unit

The process in implementation theme for the dialysis unit had the following sub-themes emerge. Their definitions are presented below:

Table 4: Sub-themes of the implementation process theme of the hemodialysis unit

Sub-themes	Definition
Planning	The process of defining the objectives, roles, and timelines of the dialysis project.
Procurement	Process of selecting private sector partners
Execution	The phase during which planned activities are implemented.
Monitoring and Evaluation (M&E)	A process of reviewing performance against set indicators.

In the Planning sub-theme, the specification of the private sector partner in the dialysis unit was identified. Informants mentioned that Ye Ab Limited was an organization that signed a tripartite PPP agreement with the Addis Ababa City Administration health bureau and Menelik II Comprehensive Specialized Hospital for a specialized dialysis unit.

A timeline of key events as stated by the informants was the organization's registration as a civil society organization on March 9th, 2020, under the civil societies' proclamation, Proclamation No. 1113/2019. Making it a non-profit provider. Ye Abe Medical signed a memorandum of understanding with the Ethiopian Ministry of Health on April 8, 2021. The tripartite private-public partnership was signed on September 9th, 2022, and was slated to commence services in September. Clinical services started operations on May 30th, 2022. Services were finally terminated in March 2024.

The objectives of the project were mentioned by informants; the primary goal of the dialysis unit was to provide dialysis services in Addis Ababa, within the context of a severe shortage of such services and their exorbitant prices. Secondly, the training of HCWs at Menelik, i.e., skill transfer so that they could conduct effective services, was also a goal. Lastly, an awareness campaign for the public via telemedicine programs was intended to complement the unit.

In the procurement sub-theme. Informants raised that when talks to start services were being held with the MOH, a lot of critical steps were skipped regarding proper PPP initiation. They noted that the project was fast-tracked and did not include a competitive bidding process. Related to this, an informant stated.

P9 "*We had started prematurely, meaning we were in the door because we knew people. That impacted us in the long run in that we lacked support."*

A monitoring and evaluation plan for the unit was set up. It was mentioned by informants that the contract signed had a binding term of 10 years starting from September 15th, 2022, to the end of the first 10-year term on September 14th, 2032, with an agreement regarding the renewal process that should start 6 months before the end term of the 10-year contract. Informants stated that contract renewal depended on a performance evaluation, which was agreed to be based on a key performance indicator KPI. With the key performance indicators, informants mentioned that a pass-fail cut-off point was agreed upon if the total scoring of the KPIs was ≥ 60% which was seen as a pass score subject to contract renewal, and if the score was < 60% that was a failing score. Informants further added that evaluation and monitoring of the unit were to be done by Menelik II Comprehensive Specialized Hospital.

In the execution sub-theme, informants mentioned that the dialysis unit intended to provide a sliding fee payment schedule, as the public patients were 80% of the intended patient load, while 20 % were intended to be private fee-paying patients. For public patients, the informants stated that fees were supposed to be subsidized by the government, subject to verification of documentation that they or their families have no source of income. In practice for the duration of the unit, there were no private fee-paying patients who had treatment at the center. According to key informants, the initial idea of adding a private fee for patients was to make the unit sustainable and replicable across different government hospitals. Informants note that there was a plan to make the same dialysis unit available at Tikur Anbessa Hospital, and a building was prepared to house

the unit if the initial dialysis unit at Menelik II Specialized Comprehensive Hospital was successful. Related to this, an informant stated.

(P1) "All patients were public patients, and they were subsidized by the government. We wanted to add private patients to help the unit expand to other government hospitals so it can stand on its own. We had the plan to expand to Tikur Anbessa, but our unit failed."

The payment modality for these public patients was paid by Menelik II Comprehensive Specialized Hospital. The payment was agreed to be 1050 Ethiopian birr for the treatment of all public outpatients. The quality of the service provided was based on international standards, more specifically the US guideline for (ESRD) End-stage renal disease.. In relation to this, an informant stated.

(P1) "There is a guideline here in the ESRD guideline that they use for Medicaid and Medicare provision. It was key to maintain the quality we used as a quality guideline for the unit."

Informants stated that most staff employed at the dialysis unit were employees of Menelik II Comprehensive Specialized Hospital, where their base salary was paid by the hospital, but the dialysis unit paid them incentives. In relation to this, an informant stated.

(P1) "The staff are from Menelik. Their salary was paid by the hospital, and we paid them incentives. We were willing to give them training and certification opportunities."

Service provisions to the dialysis unit were the responsibility of the public bodies. This included utilities such as electricity and water, as well as the facility being on the premises of Menelik II Comprehensive Specialized Hospital. A total of thirty Dialysis machines were in use: twenty-six for public patients, i.e., those that were subsidized by the government. Four machines were slated to be used for future fee-paying patients had the unit had been successful. In practice, throughout the existence of the unit, all machines were used exclusively by non-fee-paying patients due to a lack of capacity. In relation to this, an informant stated.

(P2) "We were going to provide the machines; there were 30 of them we used them all for non-fee-paying patients."

5.5 Challenges faced in the implementation of the Dialysis unit

The challenges faced in the implementation of the dialysis unit had the following sub-themes emerge

The sub-themes are defined below:

Table 6: Sub-*themes of challenges faced in the implementation of the dialysis unit theme*

Sub-themes	**Definition**
Coordination issues	Challenges due to stakeholders' lack of working together and within their structures.
Capacity gaps	Capacity gaps refer to deficiencies in the skills, knowledge to effectively deliver services
Resource constraints	Limitations in funding and consistent supply of essential supplies.
Limited technical expertise	Refers to a lack in specialized technical skills.

In the coordination issues sub-theme informants mentioned poor internal institutional dynamics within their organization. Informants mentioned a lack of transparency regarding financial and audit reports. This raised several questions such as where donations were spent. It Caused inter-institutional friction between the organization's workers affecting the unit. This led informants to question the goals and objectives of the private provider since it was a non-profit that started the service to help those in need, leading to premature resignations. Related to this an informant stated.

(P1) "We had a board meeting and one issue I raised was an audit and a financial report. They said it would be provided later, which never materialized. I turned in my resignation letter as things were not being disclosed even after asking repeatedly."

Lack of integrity within the institution is another interrelated issue that emerged during interviews. Key informants mentioned that most dialysis equipment such as machines were sourced from abroad and were imported to the country on the promise of full payment to the foreign suppliers, which did not materialize. Informants noted that the water treatment pipes needed for dialysis were unavailable locally. This led to the equipment being sourced from Türkiye. They were intended to be installed by a Turkish company. The equipment being installed had codes to lock them in in case of failure to pay. Informants recalled that they were asked to bypass the paywall to have the equipment without paying the foreign suppliers. Related to this an informant stated.

(P3) "I was asked if I could bypass the paywall of the water treatment system, it was the same thing that had happened with the dialysis machines it was an attempt by the administration not to pay the full amount."

Trust is critical in achieving an organization's stated goal, especially within PPPs. In the interviews, a common issue was raised where there were instances of breach of trust between the public sector as represented by Menelik II specialized comprehensive hospital, the beneficiaries, and the private provider. Dialysis often requires supplies that are not available locally, this has impacted the provision of services. The inability of the contract to be flexible during times of external pressure led to the build-up of mistrust between the private providers and the government. Informants noted that there was not a specific contract agreement stipulated when it was agreed that Dialysis supplies would be provided from storage facilities at Menelik II Specialized Comprehensive Hospital. It was done on an informal basis leading to exact financial restitution back to the hospital to be obscured and hazy at best which caused mistrust between the parties. Related to this an informant stated.

(P2) "Until our supplies arrived, we took them from Menelik. This caused a lot of debt, which we could not pay. This was a verbal agreement; this was not signed as a formal agreement."

The public sector's unwillingness in the eyes of the informants to accommodate unforeseen circumstances during the existence of the dialysis unit as the private providers had assumed led to misunderstandings which later evolved into mistrust. Related to this an informant stated.

(P2) "We did not expect a desperate problem like this to occur and did not prepare for it. Menelik was supposed to cooperate on this with us. They were not using the Chemicals, why were we being charged for using them; even other private companies were struggling with it. They could not understand this."

Another issue regarding trust was the trust factor between the patients and the private provider. Since patients qualified on their inability to pay for the dialysis services, and financial documents needed to be verified, patients were required to bring witnesses from their local kebele. Patients who sold their property were asked to bring their bank statements with the assumption that when they deposit substantial amounts of money from their hypothetical house sale, they would have a large lump sum of cash with constant large withdrawals to cover their treatment. Related to this an informant stated.

(P1) "If they say that they sold property or valuables and came "for treatment" they need to show a bank statement. The statement has to reflect constant withdrawals. Additionally, people that were not related to them were required as witnesses from their kebele for admittance."

This procedure of admitting patients caused the repeated submission of inauthentic documents to qualify for receiving treatment. Informants note that there were cases of fake document submission. Individuals at the unit inquired if people were being admitted based on nepotism. An informant recounted a case of one individual.

(P1) "There was one person who provided a witness from the kebele and bank statements which seemed genuine. That individual started getting treatment. He was later identified as affluent by other patients. This concern was raised to us, so we investigated that individual and discovered that he was a business owner. This set a bad precedent for the patients."

Non-profits usually carry the weight of providing services for free and being accessible to those in need. The fake document submission led to the loss of trust in the public. The services provided at the center were called into question by other patients alleging that they were based on nepotism

and favoritism. The perceptions of the patients were altered after several patients started receiving treatment damaging the credibility of the institution with the public.

During interviews, it was noted that treatment procedures bring about a lot of financial burdens. This leads to a cycle of poverty that does not just affect those who need treatment but often includes their immediate family members and the community at large, as money for dialysis is commonly raised in the form of crowd funding. The government as an institution wants to end this as a guarantor of public good and safety. Informants noted pressures to start the services. Related to this an informant stated.

(P1) "During our meeting at the Ministry of Health there were repeated calls, for us to start the service as soon as possible. There was a lot of pressure to fast-track the process. This led us to skip important steps. We went extremely far without addressing them."

Commencement of services disregarded facts on the ground, and the constant supply issues the private providers faced were not addressed. This led to various problems that could have been addressed when services initially started to be prematurely postponed. The informants believed that the pressures they encountered led to weak implementation which inevitably caused various disagreements and the eventual failure of the entire project.

Another issue was the failure of the Ethiopian customs authority to provide clear instructions for importing key medical equipment and supplies from abroad. Informants mentioned there was no outlined streamlined procedure they could follow. They also noted a lack of personnel from the MOH to guide them in abiding by laws and regulations. They recalled that having a memorandum of understanding signed with the MOH does not mean that you can import things into Ethiopia. Related to this an informant stated.

(P3) "Equipment must be sourced from abroad. We had a Memorandum of understanding with the Ministry of Health; we had been granted permission to import our supplies "by the government" duty-free. However, we did not know the proper channels for importing medical supplies. Alas, all the equipment and drugs that arrived through donation, were impounded at the airport."

Informants mention that the lack of awareness on their part partially led to the problem; further, highlighting that the procedural process of equipment importation should have been explained to them beforehand so as not to cause delays with the overall project. The lack of information and procedural guidance showed weak intergovernmental communication between the various ministries. Related to this an informant stated.

(P3) "We were later informed about EPSSA, which works with the Ministry of Health. When medical supplies arrive in Ethiopia EPSSA provides quality assurances even for donations. Because our medical supplies did not go through this proper channel, as we were unaware, it could not be cleared in time."

The constant delays caused the waste of desperately needed financial resources. Related to the impoundment of equipment, the informants mentioned that this caused budget constraints for the overall project. Related to this an informant stated.

(P3) "When something is impounded at customs you are charged for storage fees. The money we paid for the storage was from the money that people donated."

In the resource constraints sub-theme, the cost feasibility of the project was also raised as a major hurdle by the informants. The informants mentioned that the mismatch of calculations based on the contract excerpts and government subsidies greatly undermined the cost feasibility of the project. While the actual cost for dialysis was over 5000 birr per patient; the government subsidized only 1050 birr per patient, suggesting a severely underfunded unit that relied heavily on donations. These shortfalls in funding were intended to be covered by diaspora Ethiopians who, while visiting the country would hypothetically use the dialysis services. This did not materialize and led to the failure of the project. Related to this an informant stated.

(P2) "So the problem was that the money we were being paid was below what we were incurring in expenses. It was over 5000 birr, we thought Ethiopians from abroad could pay the shortfall, but no one came as a private patient, so it became unsustainable."

The inability to source supplies at competitive prices within Ethiopia was another resource constraint issue that emerged in interviews. There were unreasonable prices for simple technical supplies such as powders needed to clean chlorine. This was in stark contrast to low prices in the US. This highlights how expensive basic dialysis supplies in Addis Ababa are. Here the participants noted being unaware of the costs of imported supplies from abroad. Related to this an informant stated.

(P1) *"Chlorine must be cleared using reverse osmosis because it is lethal to the patients. To clear it out there is a chemical powder required. In Ethiopia, one packet of the powder is sold for 1800ETB. Us having tests three times a day you can imagine the cost. In the US it is sold for cents."*

A sub-theme of capacity gaps emerged where a lack of capabilities of healthcare workers and a lack of certain personnel per the ESRD guidelines was noted. Most of the staff at the dialysis unit were from Menelik II Comprehensive Specialized Hospital and required special training to align with ESRD quality guidelines. This guideline was used to operate the dialysis unit. Additionally certain personnel such as social workers and additional Biomedical engineers: needed to be hired. Related to this an informant stated.

(P1) "For the nurses we had to provide additional training such as screening patients. We needed a social worker for those with insufficient income which we hired. The other thing was additional biomedical personnel: we hired and trained through a professional who was present on our side. All of this was time-consuming."

Training surgeons was another interrelated constant hurdle faced by the unit. Informants mentioned raising this hindrance to the MOH in hopes of exploring other avenues to solve the problem. This included sending surgeons to foreign countries or recruiting health professionals from abroad to train surgeons. This was a huge obstacle in service provision that was interrelated to the knowledge sub-theme that emerged. This sometimes led to surgery being done twice on patients because it was necessary to have surgery to undergo dialysis treatment. Related to this an informant stated.

(P1) "Vascular access is a lifeline for a dialysis patient. It includes a permcath catheter, patients must get it done beforehand. If not, they cannot get treatment. The surgery failed repeatedly, and patients had to undergo surgery due to the lack of capacity of the surgeons. We explained this issue to the MOH to find a solution: surgeons getting training in India or if a person can come over here and give training to the surgeons."

Informants noted a lack of laboratories in efficiency. This was especially evident in terms of quality and capacity. The ESRD guidelines are stringent and require numerous and frequent laboratory tests. Adherence to the guideline was impacted by the lack of available laboratory capacity at Menelik II specialized comprehensive hospital affecting service provision. Informants mentioned that several crucial tests were confirmed to be available in Addis Ababa before they started services. These laboratory tests usually had arbitrarily set pass-and-fail scores attached to them rather than accurate measurements. Related to this, an informant stated.

(P1)" There are toxins built up that are compared to the toxins left after dialysis. The difference between those two is something that has to be within an acceptable range. There is a test to check this, but this test was not available in Menelik. We had to rely on private laboratories; they did not adhere to the standards we were looking for."

Menelik II specialized comprehensive hospital's lack of necessary laboratory services forced the dialysis unit to rely on private providers. This dependence led to fake laboratory results being reported by private laboratory centers, further disrupting service provision at the dialysis unit. Related to this, an informant stated.

(P1) "The results the private laboratories were reporting were not truthful."

One informant recalled cases of unrealistic potassium levels being reported.

(P1) "One patient's potassium level was reported by the private laboratory as 50 (mmol/L). The normal potassium level expected in a human's body is within a range from 3.5 maximum is 5.5

(mmol/L). If that were the case, the patient should have been deceased. The patient was walking, and that raised a red flag."

The informants stated that there is a lack of digital laboratory equipment among private laboratory providers. This further compounded the data falsification speculation. Laboratory tests also had arbitrarily set pass-and-fail scores attached to them rather than accurate measurements. Informants recalled a case where they were forced to submit lab samples to check the validity of the reports. In relation to this, an informant stated.

(P1) "The private laboratory said, it might be a data entry problem. If the instrument used is electronic how can this data entry be handmade? …We decided to test their reports using toilet water. We had the water sit in a tube for three days. Something that sits for that long has to have bacterial growth; it does not need speculation. They reported a pass result for the water."

There were concerns related to accurate data reporting as it was critical in maintaining the quality of dialysis services. Falsified laboratory data could be dire and might lead to potentially fatal outcomes. This eventually forced the unit to send basic samples to be tested at the Menelik laboratory. This arrangement was reported as better from a quality standpoint. Although hurdles with capacity remained, informants added that within one day, a minimum of three tubes were drawn from one patient. There were 90 daily patients in total. The Menelik laboratory could not handle that sample volume, impeding complete reliance. Related to this, an informant stated.

(P1) "We couldn't move to Menelik because they lacked the capacity we were looking for."

The lack of capacity in terms of quality in Addis Ababa's private laboratories created a negative feedback loop where services were not properly provided. Exorbitant financial losses on already meager funds compounded the issues with supply sourcing. This sub-theme raises several questions regarding private diagnostic operators' ability to handle samples from public hospitals.

5.6 Good practices and opportunities observed in the dialysis unit

The good practices and opportunities observed in the dialysis unit had the following subthemes emerge, which are defined below:

Table 7: Sub-themes of the opportunities and good practices in the dialysis unit theme

Sub-themes	Definitions
Resource mobilization	An opportunity where the government contributes essential service inputs
Capacity building	An opportunity for the public sector to enhance knowledge and skills through collaboration with private partners.

Resource mobilization was a sub-theme that emerged during interviews. The dialysis unit was housed on government property, greatly minimizing costs. The government provided critical utilities for service provision, such as water, electricity, and security. Water was especially an essential element for dialysis. This service provision greatly eased the burden of the unit. Related to this, an informant stated.

(P2) "The building was given to us for free, we did not pay for electricity, and there was also security. The main expense of dialysis is water; there was a good water capacity. This eased our burdens."

The government provided essential staff such as nurses. The government also addressed conflicts that might arise with staff. The government additionally paid the basic salary of the nurses. The informants mentioned how this greatly eased their overall operations, as human resources are critical for services. Related to this, an informant stated.

(P2) "All of the nurses were from Menelik. We qualified them to see if they were a good fit. Menelik paid staff salaries. Without nurses, there would have been no Dialysis unit. Looking for staff is a hassle and would have been a challenge."

Some informants reported access to supplies at times of constraint. Even though this was acquired through debt and was not a long-term solution, it was still seen as a great gesture. Related to this, an informant stated.

(P3) "For supplies that couldn't be accessed in the country, we resorted to Menelik. They provided us with acid concentrate, dialysis, bicarb, bloodline, and saline. We acquired this through debt. Working with them helped us a lot, they went above and beyond to find this for us and to source all these supplies."

Informants underscored the importance of procedural guidelines and legal frameworks when engaging in such services. They emphasized that a person knowledgeable about the legality and procedural framework was essential. Related to this, an informant stated.

(P1) "There needs to be a legal framework laid out to follow the appropriate procedures, but that system is not available in Ethiopia. Private providers that come to Ethiopia would benefit from an individual assigned to walk them through the right way of doing things."

Capacity building was also an overarching sub-theme raised by informants. It was stressed that the main focus area should be building up capacity within Ethiopia. They emphasized that healthcare professionals can spread the merits of interventions better than any other arrangement, as they have access to the wider population. This leads to the sustainability of such initiatives and their long-term benefits. Related to this, an informant stated.

(P1) *"Healthcare should not be given just to provide services; it also needs to be backed up with the motive of capacity building. That is something you should think about when it comes to replicability. The goal moving forward should not just be dependent on private providers. If we give those nurses the power of knowledge, they do not have to stick with either Ye Ab or Menelik; they can move around and work anywhere that opportunity should be given. Their experiences should count for something because these people are the ones who can replicate what they learned to the general population, and we need to think of them as assets and value them."*

Informants further elaborated on this idea, although the project was not successful and mired in several problems simultaneously an avenue, they thought the project was successful in increasing indigenous capacity. One critical aspect of PPP projects is the transfer of skills from one sector to the other sector. This helps in managing day-to-day operations effectively. With this in mind biomeds who had input in the projects and who learned from the project could not effectively put their skills to use due to cessation of services. Related to this an informant stated.

(P3) "When our operations ceased Biomeds were scattered and could not effectively replicate what they have learned in other settings. The government needs to invest in human resources they are the bread and butter of dialysis, everything else is done by hearsay if they are not present."

5.7 Implementation process for the CHAI Immunization Project

In the process theme of the CHAI program on immunization, these sub-themes emerged their definitions are presented below.

Table 8: Sub-themes of the implementation process in the immunization project

Sub-theme	Definition
Planning	Identifying key actors, timelines for important activities, and contextual factors for the provision of EPI services
Execution	execution is the outcome following the implementation plan, where planned activities are carried out.
Monitoring	The regular checking of activities and progress to make sure that the project is on track.

In the planning theme, the main NGO actor of the immunization project and its relevance to the Ethiopian healthcare sector were identified. Informants noted that CHAI is a non-profit founded in 2002. It initially started providing HIV/AIDS services in the Caribbean and Africa. Within Ethiopia, CHAI has been a significant partner to the country's nascent understanding of PPP within

the healthcare sector. CHAI has contributed to the PHSP project funded by USAID; it was one of the key partners of the MOH in crafting key PPPH guidelines during the PHSP program. In EPI services, it has played a similar and significant role.

CHAI started the EPI project with the support of Gavi in cooperation with the MOH and the Addis Ababa City Administration Health Bureau. The program lasted for about a year and a half, from November 2020 and ended in July 2022. At the project end line, the project was handed over to the health bureau for scale-up both within the city and nationally. The CHAI project in the expanded immunization program came with the goals of providing vaccination availability and aligning the country with global vaccination goals set by WHO's Immunization Agenda 2030 and Gavi's 5.0 strategy. Related to this, an informant stated.

(P8) "The foremost goal is for every child to get vaccinated and prevent morbidity and mortality of VPD, hence meeting the global agenda (Prevent ZD/UI children by the year 2030)."

Informants stated that CHAI monitored the immunization project and that continuous supportive supervision was done quarterly and emphasized frequency. Furthermore, performance indicators such as the use of standard refrigerators, temperature monitoring using FT, use of standard recording tools, and reporting & coverage were tracked regularly.

In the execution sub-theme of the immunization program, informants noted the increased uptake of vaccines and coverage, as at the time, there was an increase of PHFs providing immunization services. Informants noted that their number went from 34 to 52 facilities, and they accounted for 29% of the facilities providing immunization. Informants further added that proportions of antigens, specifically BCG, pentavalent-1, and MCv1, showed increased PHF involvement. Related to this, an informant stated

(P8) "*PHF were accounting for 20% of the BCG count, 17% for pentavalent-1 and 15% for MCV1 for all immunization services, showing an increased coverage over time."*

5.8 Challenges faced in the implementation of the immunization program.

The challenges faced in the implementation theme of the CHAI program in immunization had these sub-themes emerge: These sub-themes are defined below:

Table 9: Sub-themes of the challenges faced in the implementation of the immunization program

Sub-themes	Definitions
Coordination issues	Challenges due to stakeholders' lack of cooperation.
Limited technical expertise	Gaps in technical skills and the ability needed to manage service delivery.
Capacity gaps	Refers to the ability of healthcare workers to deliver quality services.
Resource constraints	Refer to limitations in essential inputs for service delivery, such as printable materials needed to support effective implementation.

In the coordination issues sub-theme, an issue impeding vaccine distribution was mentioned by informants. This led to the occurrence of conflicts in some sub-cities, disrupting the distribution of vaccines. Vaccines in the project are supplied through the catchment woreda HFs. When conflict occurred between sub-city officials, one PHF was noted as being supplied directly with vaccines from EPSSA. Related to this, an informant stated.

(P8) "A conflict occurred between sub-city officials, which led to impeding the distribution system to a PHF."

Overregulation of service delivery was mentioned. Informants additionally mentioned that, as it is a business they are running the guidelines, although a step in the right direction suffocates the

profitability of their business where they are not realistic to implement to their full extent vis a vis the cost incurred. It was also mentioned that to maintain quality, it requires substantial investment. This ties into the healthcare worker retention as well. The informant hoped that the public sector would be conducive to solving this issue. Related to this, an informant stated.

(P9) *"It's either we make a profit or lose out on quality; it's easier for them to make guidelines, but within what context?"*

Lack of technical expertise with refrigeration procurement was noted by informants. For a PHF to give RI services, it needed to request to open a RI service and provide standard equipment. With that being said, informants expressed that initially, some PHFs were using refrigerators that were not appropriate for the provision of immunization services. These refrigerators were not WHO-prequalified and sometimes consisted of home appliance refrigerators, decreasing vaccine potency. Related to this, an informant stated.

(P8) *"They weren't (PHFs) using the right kind of fridges, which caused issues with the vaccine and its effectiveness."*

Informants noted that the refrigeration problem was in part caused by the lack of access to foreign currency to import medical equipment from abroad, causing significant issues for the PHF. This is an issue remaining to this day due to the severe foreign currency shortage in the country.

Data reporting issues were raised where the quality of the data being reported by the PHF involved emerged as an issue. Key informants from CHAI further elaborated on the data quality issue the PHF faced during the lifetime of the project. Related to this, an informant stated.

(P8) *"Some of the vaccines were not correctly reported. For example, the oral polio vaccine had a stark difference between the tally sheets and DHIS2; it was an issue."*

The PHF health facility informant highlighted, when asked about the issue, that the health facility under him confirmed that there was an overreporting issue due to a variety of reasons. The most

important one was that the reporting system was difficult to undertake, meaning the workload associated with it. He further highlighted that during the project, the facility had access to the DHIS2 health toolkit, and that did help in the reporting of data. Related to this, the informant stated.

(P9) *"We had issues reporting data because the EPI reporting workload takes time. When we first started giving RI services, we did not have DHIS2; we later had it. This helped us report more effectively."*

Capacity gaps with knowledgeable healthcare workers were another issue that was raised. Retaining people trained on EPI was a major issue that the PHF reported. Training was to be provided by the government. The PHF acknowledged that it became difficult to maintain the balance of adherence to the guideline while maintaining HCW retention. Related to this, an informant stated.

(P9) *"The problem we faced initially was that people leave, and they need to be trained to maintain the services; it's difficult to keep them, and it's a loss once we invest in them."*

Effective Communication is a problem that is interrelated to the knowledgeable healthcare workers sub-theme. The PHF reported that they encountered problems with effective communication with the beneficiaries. When initially starting service provision, some of the participants were hesitant to take vaccines and raised objections, as mentioned earlier, with the high turnover rate of staff, this affected clear communication and caused challenges for the PHF. Related to this, an informant stated.

(P9) *"The HCWs leaving affected us. New workers were not providing information to the patients, which led to initial hesitancy."*

Resource constraint in the form of a lack of printable materials was raised; it emerged that guideline availability at respective PHFs was a recurrent challenge. The availability of such materials is extremely critical in immunization as it is how HCWs can reference following correct

procedures as stated in the national immunization guideline. Printing was a problem noted by key informants; there were no readily available coordinated sources to print the guideline materials. Related to this, an informant stated.

(P8) *"PHF couldn't get access to the printing materials, it was an issue they faced the guidelines are essential."*

5.9 Good practices and opportunities observed in the immunization project.

The good practices and opportunities observed theme in the immunization project had the following sub-theme emerge, its definition is presented below:

Table 10: Sub-themes of the opportunities and good practices in the immunization project theme

Sub-theme	**Definition**
Capacity building	Capacity building involves strengthening stakeholder linkages

Capacity building amongst stakeholders involved in the form of a forum establishment was noted. It was mentioned that it was one area that was an opportunity where key expertise, concerns, and successes were shared. This opinion was shared by both the PHF owner and the CHAI representative. The sharing of best practices between sectors helped with effective implementation and can help to respond to challenges in a unified manner. Related to this, two informants stated.

(P8) *"The arena that was set up for various stakeholders to interact with each other and learn the overall best practices of the project was helpful."*

(P9) *''Since they have been doing it for a long time "the public sector" they shared good insights with us that helped us manage things better, it was a wonderful learning experience, and a lot of things were addressed for us."*

The creation of a linkage structure was mentioned during interviews. The initial goal of the project was the improvement of the linkage between PHF and the public sector. It was cited as a significant

improvement compared to before the project. This can help with the provision of RI services more effectively while helping the PHF. Related to this, an informant stated.

(P8) *"When we did the end-line assessment, the PHF was reporting better access to the public sector and support from the health bureau, which improved a lot from the baseline."*

5.10 Implementation Process for the Integrated Diagnostic Center

The process of the integrated diagnostic center had the following sub-themes emerge, whose definition is presented below:

Table 11: Sub-themes of the implementation process theme for the integrated diagnostic center

Sub-themes	**Definition**
Planning	Planning involves defining the goals of the integrated diagnostic center in terms of epidemiologic transition, identifying areas for improvement, responsibilities for the private sector, expected outcomes, and major public stakeholders
Procurement	Process of selecting private sector partners through transparent means.
Monitoring and evaluation	Evaluation matrices and supervision of the center

In the planning sub-theme that emerged it was noted by the informants that the health profile of Ethiopia suggests that an epidemic transition is occurring. This change in disease burden within the country necessitates more advanced and specialized lab tests, pathology tests, and imaging tests not only for diagnosis but also for follow-up care throughout the lifetime of a patient. There is a growing need and demand by the public that patients coming to public facilities are not benefiting or getting the amount or expected level of services that they are supposed to get from public facilities. Related to this an informant stated.

(P7) *"When talking to clinicians providing services like front line health workers providing the care it can be seen that there are trust issues of lab results coming from public facilities and they are forced to reorder and re-prescribe tests to be done outside."*

Informants noted that an analysis was conducted to see the proportions of lab tests referred to outside of public hospitals. Across twelve public hospitals in Addis Ababa, 25 % of lab tests were done outside public health facilities, according to the informants. The informants further mentioned that the number escalates when pathology and imaging services are considered. For imaging, it was stated as being around 34% and for pathology, almost 64% of tests were done outside public facilities, according to the informants. This percentage only considers patients who can afford the services or could take their samples or themselves to private service providers. Patients who were unable to pay were just left to their fate. The informants noted the significance of considering a PPP arrangement. Related to this, an informant stated.

(P7) *"PPP could address challenges and create an access point for patients who cannot afford the often-expensive private diagnostic services."*

Multiple indications obliged the Ministry of Health to investigate alternative delivery modalities according to the informants, while also simultaneously acknowledging that the private sector has been gradually expanding its scale, mainly in major urban centers like Addis Ababa. This has given private providers the experience of engagement in non-transactional PPPs like immunization services, TB programs like the PPM, and family planning services. Related to this, an informant stated.

(P7) *"We believed there was a wealth of experience in non-transactional PPP. The Ministry of Health, through its strategic plan, has indicated the need to expand engagement with the private sector as one of the 14 strategic initiatives. This project was considered a translation of the strategic initiative into practical implementation."*

The MOH requested to investigate six areas of service. Diagnostic service areas: lab, pathology, and imaging. It also considered three non-clinical services: pre-hospital ambulance care, sterilization services as well as laundry services, and their suitability for PPP initiatives. Related to this, an informant stated.

(P7) *"We focused on the diagnostic services; the main target goal was four items: access, quality, timeliness, and cost."*

Another point raised during discussions was regarding areas intended for improvement: improving access because there is a huge challenge within the public facilities to provide access to advanced and specialized lab services was a primary goal. The second goal is to improve the quality of lab services by using an internal quality assessment and an external quality assessment with a vision of accrediting the lab under PPP. Thirdly, there was the objective to improve the timeliness of services because of the identification that some tests and samples are collected and sent outside Ethiopia and returned after a considerable period. Related to this, an informant stated.

(P7) *"We hope that the project improves turnaround time for tests and will help clinicians make clinical decisions based on informed evidence."*

Fourthly, to control costs, the healthcare system is already burdened with high out-of-pocket expenditures for lab services, and through this innovative PPP diagnostic model, the plan is to find a mechanism to cut costs and provide advanced and specialized lab services and diagnostic services.

Responsibilities and expected outcomes of private providers were mentioned, where key duties were outlined for the private party; these are presented in the table below.

*Table **12**: Key areas of responsibilities and expected outcomes, Integrated Diagnostic Center*

Key areas of responsibility	Rationale and Expected Outcome
Service quality	• Expand the test menu. The current test menu being provided at the public facilities is noticeably short and limited, and there is a service interruption. • The private sector is expected to expand an extensive list of services available and ensure the continuity of services.
Turnaround time	Reduction in result delivery time.
Access to advanced diagnostics equipment or technology upgrades	• Ability to assess existing equipment and procure and introduce new equipment. • Introduction of a referral network and sample tracking mechanism, and provide an upgrade to the existing platform. • Establish a mechanism to collect samples, process them, and send back results promptly and safely.
capacity-building expectations (e.g., knowledge transfer)	• Ability to competitively recruit competent staff. • Provide capacity-building training and hopefully transfer knowledge and skills to their staff. • The future for the center to function as a center of excellence for newly trained diagnosticians and professionals.

The Major public-sector stakeholders of the project were mentioned by informants as the MOH, MOF, federal hospitals in Addis Ababa, EHIS, EFDA, EPHI, and the AACAHB. In the procurement sub-theme, Informants stated that they followed the international competitive bidding process, where the tender announcement was made through various communication channels to attract competent providers from anywhere. With a special focus on those who have experience in the developing world. Implying that foreign stakeholders might be involved. Related to this, two informants stated.

(P6) *"We followed a very competitive process, an international competitive process to select the most qualified and experienced private entity, especially in low-income countries."*

(P7) *"Looking into the number of applicants and people who have come forward and purchased the tender documents, we have seen that international players are also interested in the local market, which we hope will continue to grow, hopefully will help us in the knowledge and skill transfer that we desperately need."*

In the monitoring and evaluation sub-theme, a discussion about key performance indicators was noted. These include 19 indicators, some focusing on the quality of services provided. In the third year of operating the center, the private sector is expected to accredit the facility and maintain accreditation status throughout the operation process. The inception of standard operating procedures, internal quality processes, and external quality processes are intended for successful execution. The contract management team is a body that gives oversight of the performance of the private sector periodically. The team is authorized to penalize the private sector whenever it underperforms. Related to this, an informant stated.

(P7) *"The earlier project management team will be converted into a contract management team once the contract is signed."*

The key performance indicators and monitoring sub-theme also included monitoring. They will be monitored by the contract management team. It includes the quality indicators to enforce the minimum quality expected of the diagnostic center. Informants indicated that Key performance indicators and performance monitoring frameworks have been embedded within the contractual agreement and will be monitored on a daily, weekly, and quarterly basis. Related to this, an informant stated.

(P7) *"We have also etched a mechanism of a kind of carrot and stick mechanism where the private sector performs well, there is a benefit that comes to it, and on the downside, there is a mechanism that they will be penalized."*

This mechanism is intended not to over-incentivize the bid winners to underperform but only incentivize them when they perform well.

5.11 Challenges expected in the implementation of the Integrated Diagnostic Center.

The challenges expected in the implementation of the integrated diagnostic center had the following sub-themes emerge. Their definitions are presented below:

Table 13: Sub-themes in the implementation challenges expected in the integrated diagnostic center theme

Sub-themes	Definition
Resource constraints	Resource constraints refer to financial and operational limitations

In the resource constraints sub-theme, cost escalation was raised as a potential issue for the center. Since the private sector will be introducing services that are not currently present within the healthcare system in the city. Informants stated that this challenge necessitates long-term financial commitment from the contracting authority and the government at large. Related to this, an informant stated.

(P7) *"Sample collection and result delivery, as well as establishing lab information system, radiology information system pathology information system are not naturally present now, and they have to pay a little bit extra to recruit staff, there will be additional costs."*

A potential cost escalation -interrelated issue was the volume issue. If the volume of samples being referred to the center does not meet the minimum volume guarantee, there will be an additional

cost implication to the contracting authority. To potentially handle the cost escalation issue and avoid price hiking by the providers, key informants stated that the private sector is not allowed to price hike unilaterally. Informants further explained that the private sector has unconditionally accepted the set user fees, the user fee in public facilities was formulated through an exceptionally long and complex process and has been agreed to.

5.12 Good practices and opportunities expected in the Integrated Diagnostic Center.

The good practice and opportunities expected in the integrated diagnostic center theme had the following sub-themes emerge. Their definitions are presented below:

Table 14: Sub-themes of the opportunities and good practices expected in the integrated diagnostic center theme

Sub-theme	Definition
Capacity building	Capacity refers to the ability of public institutions to deliver services, and positive community involvement and collaboration
Resource mobilization	Resource mobilization refers to the government's contribution of key inputs to support expected service delivery.
Innovation and efficiency	The implementation of novel PPP ideas such as cross-subsidization and the establishment of a referral network, to increase future efficiency and sustainability

In the ability of public institutions to handle service delivery, it was revealed that the abilities of the contracting authority, Saint Peter's Hospital, have been increased significantly to handle future arrangements. Informants noted the relatively better position of the hospital in understanding the key aspects of the project; the creation of a basic capacity within the hospital, where the management team of the hospital continues to learn, identify challenges, and get support from the

Ministry of Health and entities like CHAI and the Ministry of Finance. Related to this, an informant stated.

(P7) *"Saint Peter's team has been a key member of the project management team; they knew the development process; they knew the bidding process, and now the negotiation process, and they have received multiple training opportunities."*

Community engagement as a key input into the project was raised during interviews. It emerged that Health professionals working at the front line providing clinical care have been informed not only as a data source but also informed the most suitable forms of models of PPP. Informants stated having reviewed medical charts of 300 patients, 50 from 6 federal hospitals, to further their understanding of the issues the patients were facing in getting laboratory services. Related to this, an informant stated.

(P7) *"We have reviewed their charts and saw how many of what proportions of the tests were done outside, and I think we have captured the patient burdens through that mechanism."*

Informants further revealed that at the latter stages of bidding, a public sensitization workshop was established for private entities, academic institutions, and others to properly capture the feelings, interests, and needs of the community. In the resource mobilization sub-theme, informants stated that public medical diagnostic services are heavily subsidized within the public sector and that the private sector's motive is to function with profit. They had to find a mechanism where both objectives were met. Related to this, an informant stated.

(P7) *"There is an objective of the public to expand lab services and improve quality and an objective of the private sector to provide valuable services and introduce value for money."*

In the establishment of the center, the government has decided to contribute to the provision of critical infrastructure. That includes the basic space where the diagnostic service will be established. It has also been decided to transfer the use of existing lab pathology and imaging equipment and to support basic utilities such as electricity, water, internet services, security services, and waste management. This was put in place to ease the burdens of the private providers. Related to this, an informant stated.

(P7) *"We wanted to offload many private responsibilities towards the public sector to support them."*

Innovative ideas to increase efficiency were noted. Informants stated that the government had decided that the center would be an integrated diagnostic center. This means that the center will not be serving one hospital; rather, federal hospitals located in Addis Ababa will be linked through a referral pathway to benefit from the services. Informants stated that this idea can be innovatively used to cover the cost of the service. It was noted that substantial informal sector patients are now enrolled in the Ethiopian Health Insurance Service (CBHI). Related to this, an informant stated.

(P7) *"Through the potential establishment of a referral network, the continuum of care patients who are being referred to tertiary hospitals in Addis Ababa could benefit from the center, where their cost is taken care of by the CBHI. Thus, the direct cost or out-of-pocket expenditure using this service is reduced."*

Cross-subsidization was also another innovative solution to encourage sustainability. Informants noted that a green light was given by the government to consider it. This is where the center would provide services to private patients, and they must pay higher prices. The excess revenue generated from that source could be used to cross-subsidize low-income Patients. Interrelated to efficiency in service delivery, transparency and accountability were raised by the informants. Informants stated that accountability was established compared to other initiatives because of the time it took to conduct the feasibility study, the appraisal process, and the bidding process. Related to this, an informant stated.

(P7) *"We feel that the private sector has, throughout this period, identified its niche and has developed the capacity to work. It also developed trust in working with the government."*

Informants also noted that there is clear political commitment from the government side, both the Ministry of Health and the Ministry of Finance, and even from the national PPP board. This could serve as a reassurance of continued support and guidance. Related to this, an informant stated.

(P7) *"This project has been reviewed by the national PPP board almost three times, showing a commitment from the public side, and I believe this has boosted the confidence of the private sector engagement with the public."*

Informants added that the center was tied to a contractual agreement and that all clauses indicate roles and responsibilities that are set out to all parties involved. Mechanisms to avert conflict,

resolve issues, and arbitrate have been established through proper legal consultation. Related to this, an informant stated.

(P7) *"We believe that the process we went through clearly spelled out and showed commitment from the public. I think accountability has been well taken care of."*

6. Discussion

This study has identified the implementation process of the selected PPP projects in terms of planning, procurement, execution, monitoring, and evaluation. Additionally, it has identified several challenges such as coordination issues, capacity gaps, resource constraints and limited technical expertise that affected service provisions. Conversely opportunities and good practices such as resource mobilization, capacity building and innovation & efficiency were identified.

In planning some projects such as the dialysis unit lacked acknowledgment from the MOF implying a somewhat decentralized state which is similar to other PPP dialysis units in Ethiopia (12,38). The decentralized dialysis unit in Ethiopia's prior experience was impacted in service provision by a lack of support from the central government leading to issues of continued reliable service provision (32). This is similar to the dialysis unit in Menelik and might explain the units premature failure. Conversely other PPP projects such as the integrated diagnostic center were noted as being initiated with tacit acknowledgment of the MOF. This might help in addressing sustainability and effective implementation issues. This two structures of initiation sharply contrasts with other studies conducted in neighboring Kenya where there is a more uniform decentralized approach to health financing schemes such as PPPs where each constituent decides what best fits their unique situations (24,28). This may lead to better outcomes and strategies in addressing inadequacies as well as quick and measured responses.

The procurement of private sector partners in the dialysis unit was revealed to lack transparency, private sector partners were not selected on who can best handle the risk as evidenced by the literature (13,18). This may have compromised service delivery and led to the eventual failure of the unit. Conversely the planned procurement of private sector partners in the integrated diagnostic center was noted as being competitive and transparent. As well as including international bidders. This selection procedure may lead to better accountability and transparency, which are hallmarks of a successful PPP execution scheme (13,18).

In Monitoring and evaluation unlike PPP experiences in Malawi where there was a lack of noted performance evaluation metrices all three projects had systems to monitor performance. This aided in a structured implementation scheme for the (immunization program) characteristic of a successful execution strategy (28). The integrated diagnostic center is expected to accredit itself after 3 years of service. This is similar to prior studies conducted in Lesotho (25). In Lesotho's experiences accreditation of facilities involved led to improved quality but there were doubts on whether this was due to the accreditation process itself or the PPP arrangement. This issue requires further critical examination as it is critical to understanding the perceived benefits of PPPs within healthcare. Execution of the PPP project such as the one in the immunization program showed a marked increase in PHF providing immunization services that may increase access and coverage. This is similar to studies in lower middle-income countries like India, Bangladesh, and Pakistan (19,21,22).

Challenges in coordination were raised in both the dialysis unit and the immunization program issues of conflict in vaccine distribution and lack of trust between the public and private sector in provision of supplies within the dialysis unit emerged. This may have significantly damaged intra sectoral collaboration and is line with other prior studies in PPP conducted within Ethiopia (8). Implying that there is still a long way to go in building up mutual trust and coordination between the public and private sectors. Capacity gaps were noted in critical HCWS in both the dialysis unit and the immunization program, staff had inadequate skills, or were affected by high turnover rate, and Improper training. Resource constraints in the form of cost issues & escalations were noted as a major problem in the dialysis unit and a major issue that might hinder services in the integrated diagnostic center. Additionally, limited technical expertise in the form of both lack in laboratory capacity to handle sample volumes, W.H.O. standard refrigeration usage were expressed and caused significant disruptions in service provision. Accurate data reporting issues still remain

evidenced by the immunization programs vaccination rates reporting. This is similar to other PPP studies in immunization services within Ethiopia where it was noted that data was inaccurately reported (38). All three challenges have similarities with challenges PPPs faced in other African countries such as Malawi (28). Capacity building in the form of knowledge transfer from the private sector was noted in both the dialysis unit and the immunization program this is similar to other studies in Kenya where PPPs achieved measurable successes in knowledge transfer to critical HCW (27,). This opportunity might help in continued success and replicability.

The innovative solutions to handle more public patients i.e., those that do not pay fees (cross-subsidization) and the creation of referral systems to increase and standardize intra hospital linkage structures were stated. This is in line with what the Ethiopian health sector guideline for PPP envisages when conjuring the merits of the PPP model (31). This may lead to an efficient and accessible healthcare that addresses catastrophic spending for the public.

7. Conclusion

This study has shown that PPP is still a novel concept within the healthcare sector. It has identified the main implementation processes of selected PPP projects showing the different starting points of each. This shows the fragmented nature of the PPP projects within Addis Ababa's healthcare scene. It has also identified major challenges in implementation that require multistakeholder engagement to improve outcomes. Possible good practices such as cross-subsidization and the creation of referral networks were identified. This might have an impact on continued efforts to improve sustainability.

As evidenced by this research, the health sector is moving towards the initiation of pure PPP projects, and a trend away from non-transactional PPP projects that is a stepping stone in the right direction. Whether these engagements are successful depends on a variety of measures. But one thing is clear the concept of PPP is that there are two parties involved and miscalculation, or misguided policy by just one partner would affect the relationship for both parties making these engagements unworkable.

8. Recommendations

Weak institutional dynamics, whether within the private sector, the public sector, or their relationship led to poor outcomes, this is especially true within public-private partnerships in clinical services. A lot of contextual factors must be studied before the initiation of such endeavors. Unlike public-private partnerships with infrastructure and other non-health-related public services, health is a public good making it highly precious and delicate. The public sector should consider working in collaboration with the private sector to address any misunderstandings that might ensue during the lifetime of a project, as contract flexibility is required during times of crises building up a level of trust to ensure the efficient provision of services. This creates a culture of putting the patient first instead of a waste of resources and conflict while maintaining cordial relationships between all stakeholders. Qualified and experienced Health workers are at the heart of an effective health system. The lack thereof of expertise within the healthcare sector can cause dire potentially life-threatening conditions at their worst. This is a key issue that needs to be addressed especially within the context of Ethiopia where we face twin issues of severe Health worker shortages within the public sector and unqualified professionals within the private sector, incentivization should be used to retain critical healthcare workers.

The PPP with laboratory services should also be carefully studied to ensure compliance with quality guidelines and public safety standards. The supply issues facing medical supplies and equipment should be a focus area as more clinical services are on the verge of being handed over to private providers. Additionally, capacity building on all levels is something of critical importance to the success of PPPs within the healthcare sector, this leads to clear objectives, goals, communication channels, and accountability from all stakeholders. Indigenous Ethiopian capacity: especially of healthcare workers should be built up in the healthcare arena as the transfer of skills is necessary for replicability and sustainability on a long-term basis. The feasibility of such initiatives is also an area worth assessing before service commencement. Cost feasibility and contextual factors whether political, institutional, or technical should be addressed and outlined. The final objective of private-public partnerships should not be limited to the initiation of projects but should focus on sustainability. Such units should support themselves via income generation while simultaneously harnessing the strengths and abilities of the private sector.

9. Strengths and limitations of the study

This study had several strengths and limitations; the strength of the study lies in its exploration of a previously unexplored phenomenon within the Ethiopian context. There is a lack of research within this type of arrangement, only one study has previously been done in PPP within hemodialysis services. Although there is research on immunization services, there is a lack of literature post post-PHSP project termination within Ethiopia. Its exploration of PPP projects in a linear progression from the post-PHSP phase out to the integrated unit summarizes what has been learned so far with PPP thus improving the ability to address constraints. The limitations of the study are the sensitive nature of the dialysis unit, the cessation of the PPP projects, and the lack of engagement from some stakeholders due to it. Since this research is based on the perceptions and experiences of participants it is highly subjective.

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11. Annex

Annex 1: Information Sheet and Consent Form in English

Introduction

In order to be a study participant in the MPH thesis project titled "Assessing experiences in public-private partnerships in clinical services in Addis Ababa: an exploratory qualitative study," it is paramount to obtain your consent of participation. Participation in this study involves providing insights related to your experiences with public private partnerships specifically within the healthcare sector. The main objective of this study is to assess the experiences of public private partnerships within clinical services from the perspective of stakeholders. By agreeing to participate, you will contribute to the understanding of the implementation process, challenges and opportunities faced during the implementation of PPP services within the healthcare sector.

Risks and benefits

There are no risks that emanate with giving your insight in this study. Participation is on a voluntary basis and can be withdrawn at any time you choose or see fit. Personal information will be kept confidential. By signing this consent form, you indicate your acceptance in being a participant in this study.

If you agree to participate, you will partake in an interview with a duration of approximately 30 minutes. The primary investigator will ask you questions related to your perceptions of the challenges, opportunities, and the process of implementation in your specific public private partnership project. If you have any questions regarding the study, its implications or need an explanation you are encouraged to ask at any time.

Confidentiality

The data obtained from this research will be stored, and confidentiality will be kept by anonymizing you, the participant, and your inputs. Data access will be limited to researchers engaged in this research. Outputs of this thesis have the potential to be disseminated through academic journals and will ensure privacy of you, the participant.

Contact information

As a research participant, if you have a cause of concern in the thesis, you can reach out to the principal investigator, Daniel Haileselassie, via phone number +251904979458 or email dtekie934@gmail.com

Consent Form

I understand the information provided to me and its implications, I understand my participation is on a voluntary basis and that my consent can be withdrawn at any time I wish, I voluntarily agree to be a participant in this study

Participants signature ----------Date----------

Primary investigators signature----------Date----------

Annex 2: information Sheet and Consent Form in Amharic

የፍቃድ ቅጽ

መግቢያ

በአዲስ አበባ የክሊኒካል አገልግሎቶችን የመንግስት እና የግል ጋራ አጋርነት በጤና ልምድን መገምገም፡ ኤክስፐሎራቶሪ ጥናት በሚል ርዕስ በተዘጋጀው የመመረቂያ ፕሮጀክት ላይ ለመሳተፍ የእርስዎን ፈቃድ ማግኘት ያስፈልጋል። በዚህ ጥናት ውስጥ መሳተፍዎ የመንግስት እና የግል ጋራ አጋርነት በጤና ካጋጠሙዎት ልምድ ጋር የተያያዙ መረጃዎችን እና ግንዛቤዎችን መስጠትን ያካትታል። የዚህ ምርምር ዓላማ የመንግስት እና የግል ጋራ አጋርነት በጤና ክሊኒካዊ አገልግሎቶችን ልምዶችን ለመገምገም ነው. በመሳተፍ፣ እንደዚህ አይነት አገልግሎቶችን የሚያጋጥሟቸውን ተግዳሮቶች እና እድሎች ለመረዳት አስተዋፅዖ ያደርጋሉ።

አደጋዎች እና ጥቅሞች

በዚህ ጥናት ውስጥ ከመሳተፍ ጋር የተያያዙ ምንም የሚጠበቁ አደጋዎች የሉም. የእርስዎ ተሳትፎ በፈቃደኝነት ነው, እና በማንኛውም ጊዜ ያለ ምንም አሉታዊ ውጤት የመውጣት መብት አለዎት. የግል መረጃዎ በሚስጥር ይጠበቃል እና ለዚህ ጥናት ዓላማ ብቻ ጥቅም ላይ ይውላል። ይህን የስምምነት ቅጽ በመፈረም በዚህ ጥናት ውስጥ ለመሳተፍ ፈቃደኛ መሆንዎን ያሳያሉ። በዚህ ጥናት ለመካፈል ፈቃደኛ ከሆናችሁ በኋላ በግምት ወደ 30 ደቂቃ የሚፈጅ ጊዜ በቃለ መጠይቁ ውስጥ እንድትሳተፉ ይጠየቃሉ። የዳሰሳ ጥናቱ ተሳታፊዎች ስለ ተግዳሮቶች፣ እድሎች ግንዛቤ የሚመለከት ጥያቄ ይጠይቃል። በጥያቄው ላይ ማንኛቸውም ጥያቄዎች ካሉዎት ወይም ማብራሪያ ከፈለጉ መጠየቅ ይችላሉ።

ሚስጥራዊነት

ከዚህ የጥናት ሙከራ የተገኘው መረጃ ደህንነቱ በተጠበቀ እና በማይታወቅ መልኩ ይከማቻል። የመረጃው ተደራሽነት በዚህ ፕሮጀክት ውስጥ በቀጥታ ለሚሳተፉ ተመራማሪዎች ብቻ የተገደበ ይሆናል። የእያንዳንዱ ተሳታፊ ግላዊነት እና ምስጢራዊነት

መከበሩን በማረጋገጥ የዚህ ፕሮጀክት ውጤቶች በአካዳሚክ መጽሔቶች፣ ሪፖርቶች ወይም አቀራረቦች የመሰራጨት አቅም አላቸው።

የተመራማሪ መረጃ

ስለ ጥናቱ ማንኛውም አይነት ጥያቄ ወይም ስጋት ካለዎት ዋናውን መርማሪ ዳንኤል ታይለስላሴን በስልክ ቁጥር +251904979458 ወይም በኢሜል dtekie934@gmail.com ማግኘት ይችላሉ።

የስምምነት ቅጽ

የቀረበውን መረጃ አንብቤ ተረድቻለሁ፣ ተሳትፎዬ በፈቃደኝነት እንደሆነ እና በማንኛውም ጊዜ ፈቃዴን ማንሳት እንደምችል ተረድቻለሁ፣ በዚህ ጥናት ለመሳተፍ በፈቃዴ ተስማምቻለሁ

የተሳታፊዎች ፊርማ ---------- ቀን ----------

የጠያቂዎች ፊርማ ----------ቀን----------

Annex 3: Interview guide in English

A. **characteristic of participant**

- Current role in your organization: _____

B. **Background and Role**

 What is your role and responsibilities related to the dialysis unit, immunization program or laboratory services?

C. **Planning and Objectives**

 What are and were the main goals for the dialysis unit, the immunization program & the integrated diagnostic center?

 Why was the PPP model chosen over other options to address the health care challenges?

 What specific functions or services was and will be provided to the beneficiaries?

D. Stakeholder Involvement

 Who are and were the key stakeholders involved in designing and bidding for your PPP project?

 How and were healthcare worker engaged in the process?

 How is or was patient or community feedback considered in the process?

E. Opportunities and Expectations

 What improvements were seen or are expected from this PPP in terms of:

- Service quality?

-Increased Coverage?

- Lower waiting times?

- Access to services?

- And introduction of new equipment?

 Were /are there any capacity-building initiatives?

F. Risks and Challenges

 What were and are the risks or concerns experienced or expected?

 How were/will issues such as quality control, pricing, and accountability addressed?

 were/are there legal or regulatory roadblocks faced?

 Did/Does the public institution have the capacity to monitor and manage this PPP?

 What systems or structures are/were in place (or needed) to oversee the performance?

G. Monitoring and Evaluation

 How will/ was the quality and performance of the services be evaluated?

 What indicators will/were used?

H. Final Reflections

 Reflecting on your project, what advice would you give to guarantee a successful public-private partnership project within the health sector?

Annex 4: Interview guide in Amharic

የስነሕዝብ መረጃ

- በድርጅቱ ውስጥ አሁን ያለው ሚና፡ _____

ሚና

• በአገልግሎቶች ውስጥ ያለዎትን ሚና እና ኃላፊነቶች በአጭሩ መግለጽ ይችላሉ?

ሐ. እቅድ እና ዓላማዎች

• ከግል አካል ጋር የመተባበር ዋና ዋና ግቦች ምንድን ናቸው?

• ለምንድነው የPPP ሞዴል ከሌሎች አማራጮች (ለምሳሌ በቤት ውስጥ መስፋፋት) የተመረጠው?

• የግል አጋር ምን ልዩ ተግባራትን ወይም አገልግሎቶችን ይሰጣል?

የባለድርሻ አካላት ተሳትፎ

• ለዚህ ፒ.ፒ.ፒ.ን በመንደፍ እና በመጫረት ላይ የተሳተፉት ቁልፍ ባለድርሻ አካላት እነማን ናቸው?

• ባለሙያዎች እና የጤና እንክብካቤ ሰራተኞች በሂደቱ ውስጥ እንዴት እየተሳተፉ ነው?

• የታካሚ ወይም የማህበረሰብ ግብአት እንዴት ይታሰባል?

እድሎች

• ከዚህ PPP በሚከተለው መልኩ ምን መሻሻሎች ይጠበቃሉ፡-

- የአገልግሎት ጥራት?

- የመመለሻ ጊዜ?

- መድረስ?

- የመሣሪያዎች ወይም የቴክኖሎጂ ማሻሻያዎች?

• የአቅም ግንባታ የሚጠበቁ ነገሮች አሉ (ለምሳሌ፡ ስልጠና፣ የእውቀት ሽግግር)?

ስጋቶች እና ተግዳሮቶች

• ሊሆኑ የሚችሉ ስጋቶች ወይም ስጋቶች ምንድን ናቸው?

• እንደ የጥራት ቁጥጥር፣ የዋጋ አወጣጥ እና ተጠያቂነት ያሉ ጉዳዮች እንዴት ይስተናገዳሉ?

• የህግ ወይም የቁጥጥር ስጋቶች አሉ?

• የመንግስት ተቋሙ ይህንን ፒፒፒ የመከታተልና የማስተዳደር አቅም አለው ወይ?

• አፈፃፀሙን ለመቆጣጠር ምን አይነት ስርዓቶች ወይም አወቃቀሮች ተዘርግተው ወይም ያስፈልጋሉ።

ክትትል እና ግምገማ

• ጥራት እና አፈጻጸም እንዴት ይገመገማል?

• ምን አመልካቾች ወይም መመዘኛዎች ጥቅም ላይ ይውላሉ?

የመጨረሻ ሐሳቦች

• ይህ ፒፒፒ ወደ ፊት ሲሄድ የእርስዎ ተስፋዎች ወይም ስጋቶች ምንድን ናቸው?

• የተሳካ የመንግስት እና የግል አጋርነት ለማረጋገጥ ምን ምክር ይሰጣሉ?

Annex 5: Codebook

CODEBOOK: ASSESING THE EXPERIENCES OF PUBLIC PRIVATE PARTNERSHIPS IN CLINICAL SERVICES WITHIN THE HEALTHCARE SECTOR: AN EXPLORATORY QUALITATIVE STUDY IN ADDIS ABABA					
No.	**Themes**	**Sub-themes**	**Description**	**Codes**	**Example**
1.	**Implementation process**	**Planning**	Involves the identification of objectives, key milestones,roles&responsibilities, expected outcomes, area of improvement and contextual factors for project initiation.	Objective goals Context Nature of the organization Actors Outcome	*"The goal foremost is for every child to get vaccinated and prevent morbidity and mortality of VPD hence meeting global agenda (Prevent ZD/UI children by the year 2030)"*
		Procurement	Process of selecting private sector partners through transparent means.	Private partner selection	*"We followed a very competitive process, an international competitive process to select the most qualified and experienced private entity especially in low-income countries."*
		Execution	Phase during which planned activities are implemented.	Outcome after implementation	*"All patients were public patients, and they were subsided by the government. We wanted to add private patients to help the unit expand to other government hospitals so it can stand on its own, we had the plan to expand to Tikur Anbessa, but our unit failed."*
		Monitoring & evaluation	Performance assessment insuring proper service delivery.	KPI Evaluation	*"We have also etched mechanism of kind of carrot and stick a mechanism where the private sector performs well there is a benefit that comes to it, and on the downside, there is a mechanism that they will be penalized."*
2.	**Challenges in implementation**	**Coordination issues**	Challenges due to stakeholders lack of working together and within their structures.	Trust public Trust intersectoral Institutional dynamics	*"We did not expect a desperate problem like this to occur and did not prepare for it. Menelik was supposed to cooperate on this with us. They were not using the Chemicals, why were we being charged for using them; even other private companies were struggling with it. They could not understand this."*
		Capacity gaps	key health workers may have limited experience, training or skills impacting service provision	Surgeons training	*"Vascular access is a lifeline for a dialysis patient. It includes a permcath catheter, patients must get it done beforehand. If not, they cannot get treatment. The surgery failed repeatedly, and patients had to undergo surgery due to the lack of capacity of the surgeons. We explained this issue to the MOH to find a solution: surgeons getting training in India or if a*

					person can come over here and give training to the surgeons."
		Resource constraints	Lack in financial and material resources deterring effective implementation and sustainability	Cost escalation Cost feasibility	*"Sample collection and result delivery as well as establishing lab information system radiology information system pathology information system are not naturally present now, and they have to pay a little bit extra to recruit staff, there will be additional costs."*
		Limited technical expertise	gaps in technical skills and ability needed to manage service delivery.	Refiguration Data reporting Tally sheet DHIS2	*"Human errors with the collection process, and the lack of oversight during the collection process."*
3.	**Opportunities & good practices**	**Innovation and efficiency**	The implementation of novel PPP ideas such as cross-subsidization and the establishment of referral network to increase efficiency and sustainability	Referral network Cross-subsidization	*"Through the potential establishment of a referral network, the continuum of care patients that are being referred to tertiary hospitals in Addis Ababa could benefit from the center where their cost is taken care of by the CBHI. Thus, the direct cost or out-of-pocket expenditure using this service is reduced."*
		Resource mobilization	An opportunity where the government contributes essential inputs to reduce burdens for private providers	Utilities Staff Security Electricity water	*"We wanted to offload many private responsibilities towards the public sector to support them."*
		Capacity building	improve the capacity of the public sector in both knowledge transfer and training	Knowledge transfer Forum establishment	*"Healthcare should not be given just to provide services it also needs to be backed up with the motive of capacity building. That is something you should think about when it comes to replicability. The goal moving forward should not just be dependent on private providers. If we give those nurses the power of knowledge they do not have to stick with either Ye Ab or Menelik they can move around and work anywhere that opportunity should be given. Their experiences should count for something because these people are the ones that can replicate what they learned to the general population, and we need to think of them as assets and value them*."

ASSURANCE OF PRINCIPAL INVESTIGATOR

I, the undersigned MPH student declare that this thesis is my original work in fulfillment of requirement for the masters of public health in health economics.

Name of the student: Daniel Haileselassie

Date: 08/7/2025

Signature: ----------

APPROVAL OF THE PRIMARY ADVISOR

This thesis work has been submitted with our approval as the university advisor.

Name of the primary advisor: Professor Damen Haile Mariam

Date: 08/7/2025

Signature: ----------