INSPECTORATE
OF GOVERNMENT

STUDY ON THE EXTENT AND COSTS OF CORRUPTION IN THE HEALTH SECTOR IN UGANDA

December 2021

FOREWORD

Foreword

Corruption in Uganda's health sector hinders access to vital services, worsening poverty and increasing inequality. Access to essential services across the country is often dependent on the ability to pay a bribe to the public servants who act as informal gatekeepers. The health sector is a key public service in Uganda and has a large influence on citizens day-to-day life. Most citizen of Uganda will be in touch with the sector several times in a life time.

Despite being a clear challenge, comprehensive upto date estimates of the extent and cost of corruption in the health sector are lacking. By failing to measure the cost of corruption in the health sector and establishing the magnitude of the problem to Ugandans, adequate and appropriate anti-corruption measures cannot be developed.

The Inspectorate of Government (IG) in 2021, commissioned the research on the cost and extent of corruption in the Health Sector in Uganda with support from the German Government, through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmBH.The research was conducted by the Governance Transparency Institute (Hungary) which is an international and non-partisan think tank in good governance.

With the combined effort of all the laws and institutions in place the war against corruption has mainly centered on whistleblowers, tracking suspects, investigating, prosecution, conviction, incarcerate and recovery of the loot. But the fact is that only a very small percentage of corruption gets detected or even gets to the level of being investigated at all.

There is therefore need to rebrand the war from being an Executive, Parliament, Judiciary, IG, NGOs and anti-corruption agencies' war with citizens of Uganda being mere frustrated spectators, to a Citizens' War.

As we release the report of extent and cost of Corruption in the Health Sector Uganda, it is my hope that relevant authorities and institutions in the sector will take the findings seroiusly, have further deliberations to improve on the implementation of strategies for the elimination of corruption in the Health Sector in Uganda.

I have the honour to present the report on the extent and cost of Corruption in the Health Sector to the people of Uganda and all stakeholders in the fight to eliminate corruption. I implore all stakeholders to read this report and set targets that will help deter, prevent and eliminate corruption in all public institutions.

Beti Kamya Turwomwe
INSPECTOR GENERAL OF GOVERNMENT

About the Authors

In 2021, the Inspectorate of Government, initiated the research on the cost of corruption in Uganda with support from the German Government, through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmBH. The Government Transparency Institute GTI) a non-partisan think tank researching and advocating good governance was contracted to conduct the study. Born from the research and Civil Society activism of its founder Mihály Fazekas, the Institute was founded in Budapest, Hungary in 2015 to provide an independent, research-driven voice to the causes of transparency, anti-corruption, and good governance in Europe and beyond. It is financed by private donations, European research funds, and government contract work, and works independently of political parties or special interest groups. The aim of the Institute is to better understand the causes, characteristics, and consequences of low-quality governance with interdisciplinary analysis, drawing on political science, economics, law, and data science.

The Institute help citizens and companies hold their governments accountable through the publication of novel datasets and robust analyses. The unique research approach uses Big Data, econometrics, and qualitative methods to understand micro-behaviour, macro-outcomes, and the links between the two. The main themes include corruption, collusion, spending efficiency, administrative quality, public procurement, and legislative processes. We believe that the combination of a thorough qualitative understanding and precise quantitative measurement of the state is the foundation of good governance.

The main authors of the report on cost of corruption were; Mihály Fazekas and Olena Nikulina (Government Transparency Institute)

Mihály Fazekas is an Assistant Professor at the Central European University, Department of Public Policy, with a focus on using Big Data methods to understand the quality of government globally. He is also the Scientific Director of an innovative think-tank, the Government Transparency Institute. He has a PhD from the University of Cambridge where he pioneered Big Data Methods to measure and understand high-level corruption in Central- and Eastern Europe. His research and policy interests revolve around corruption, favouritism, private sector collusion, and government spending efficiency. Methodologically, he has experience in both quantitative and qualitative methods in diverse fields such as public policy, economics, and political science.

He worked at the University of Cambridge as the scientific coordinator of the Horizon 2020 funded project DIGIWHIST which used a Big Data approach to measuring corruption risks, administrative capacity, and transparency in public procurement in 33 European countries. While at University College London, he served as a co-Principal Investigator on the FCDO-funded research project looking at anti-corruption in development aid funded procurement.

He regularly consults the European Commission, Council of Europe, EBRD, OECD, World Bank, and a range of national governments and NGOs across the globe. He led a team of FCDO UK, GTI, and IMF which won the 1st prize at the IMF Anti-Corruption Challenge for measuring corruption and its costs globally.

Olena Nikulina is a Data Scientist at GTI. She holds a MA degree in Sociology (Kyiv-Mohyla Academy) and Public Policy (Central European University). Previously, she worked as a data journalist and an analyst in NGOs in Ukraine. Along with that, she consulted governmental agencies in Ukraine on data collection and analysis. She is interested in working with open data and large governmental data for studying political corruption.

GTI also received advice from the expert pool: Dina Balabanova (London School of Hygiene and Tropical Medicine), Elizabeth Dávid-Barrett (University of Sussex), Eleanor Hutchinson (London School of Hygiene and Tropical Medicine) Monica Kirya (CMI-U4), and Caryn Peiffer (University of Bristol) while compiling the report.

GTI also worked with Dr. Daniel Kibuuka Musoke, International Research Consortium and Dr. Dan Kaggwa Ssenjovu, Infectious Disease Institute Makerere University who conducted the National Survey on the extent and Cost of Corruption in the Health Sector; Frederick Golooba-Mutebi, a Political Scientist with special interest in Political Economy together with Agather Atuhaire undertook the qualitative research interviews and Focus Group Discussions on the extent and cost of corruption in the Health Sector in Uganda.

The findings and analysis in this report is attributed to the authors and by no means constitute the views of the Inspectorate of Government of Uganda or the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

Table of Contents

Foreword 2

Abbreviations and Acronyms 3

Executive Summary 4

Chapter One: Introduction 6

1.0 Background 6

1.2 Objective of the study 6

1.3 Healthcare system of Uganda 7

Table 1. Types of healthcare facilities in Uganda. 8

1.4 Funding and Corruption in the Health System 8

Chapter Two: Conceptual Framework **10**

2.0 Definitions: Typology of Corruption 10

Table 2. Low-level vs. high-level corruption 11

2.1 Corrupt practices in Public Healthcare 11

Table 3: Corrupt practices in public healthcare 12

2.2 Corruption Drivers 13

2.2.1 Corruption as a principal-agent problem 13

2.2.2 Corruption as a collective action problem and particularism 13

2.2.3 Corruption as a problem-solving functionality 13

2.3 Costs of corruption 14

Chapter Three: Methods and Data **17**

3.1 Focus of the Analysis 17

3.2 Administrative data 17

3.2.1 Red flag methodology to analyse procurement data 17

3.2.2 Other government administrative data 17

3.2.3 Review of literature and policy documents 18

3.2.4 Interviews 18

3.2.5 Household survey 18

3.2.6 Secondary survey data 19

Chapter Four: Study findings 20

4.1 Costs of giving bribes or gifts to healthcare providers 20

4.1.2 Requests for bribes by facility 21

4.1.3 Requests for bribes by medical condition 22

4.1.4 Motivations for bribery 23

4.1.5 Factors associated with bribery 25

4.1.6 Value or direct costs of bribes 26

4.1.7 Loss of treatment because of bribery and unofficial fees 27

4.2 Losses owing to absenteeism 28

4.2.1 Factors associated with experiences of absenteeism 31

4.3 Losses owing to embezzlement 32

4.4 Losses owing to procurement corruption 35
4.5 Other costs 36
Chapter Five: Summary of Key Findings 38
Chapter Six: Interpretation and policy recommendations 40
Annex A. Red flag methodology to analyse procurement data 48
Annex B. Survey methodology and questionnaire 49
Annex C. Survey questionnaire 51
B. Demographic and social characteristics of the household 53
Household information 54
C. Demand for service, including lack of service - healthcare 57
Annex D. List of Sample Enumeration Areas 64
Annex F. Comparison of household survey estimates with the estimates from other relevant surveys. 68
References 69

Abbreviations and Acronyms

CPI	Corruption Perception Index
CRI	Corruption Risk Indicator
EUR	European Currency
GDP	Gross Domestic Product
GIZ	Gesellschaft Fur Internationale Zusammenarbeit
HMU	Health Monitoring Unit
HUMC	Health Unit Management Committee
IG	Inspectorate of Government
MOFPED	Ministry of Finance Planning and Economic Development
NGO	Non-governmental organization
NDA	National Drug Authority
NIS	National Integrity Survey
NMS	National Medical Stores
PPDA	Public Procurement and Disposal of Public Assets
UGX	Uganda Shillings
USD	United States Dollar
VHT	Village Health Team
WHO	World Health Organization

Executive Summary

Introduction:

The Inspectorate of Government in 2021, initiated the study on the cost and extent of Corruption in the Health Sector in Uganda with support from the German Government, through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmBH. The study was conducted by the Governance Transparency Institute (Hungary) an international and non-partisan think tank Organization in good governance. The study was undertaken using available data and included few interviews with experts, practitioners and relevant public officials from Uganda and beyond. The International Research Consortium Ltd, headed by Dr Daniel Kibuuka Musoke undertook a national survey on extent and cost of corruption in health sector in Uganda and the qualitative information was conducted using research interviews and focus group discussions by a team led by Frederick Golooba-Mutebi.

The overall objective of the study was to generate empirical data on the cost and extent of corruption in the Health Sector Uganda that can be used for dialogue with stakeholders to inform anti-corruption policy formulation, strategies, and programs in the sector. The baseline study shall provide a basis to understand and measure if an enhanced focus to curb corruption in the Health sector will have a positive impact over an extended period. The study will help to identify why citizens pay bribes to get services, but also why the health workers and staff in the Health sector asks for bribes.

In the Ugandan Health System, corruption hinders access to vital services, worsening poverty and increasing inequality. Access to essential services across the country is often dependent on the ability to pay a bribe to the public servants who act as informal gatekeepers. Despite the knowledge that corruption is widespread and undermines the goals of the health sector, the development of anti-corruption policy has been challenged by a lack of data on the overall cost of corruption in healthcare in the country.

To address this gap in knowledge, this report provides a detailed estimate of the extent and costs of corruption in the healthcare sector in Uganda for 2019, the study differentiates between direct and indirect costs. The first group includes that which can be directly attributed to corrupt acts, while the second group includes all those that result from corrupt acts through a series of interactions on the longer term. The study also attributes the costs of corruption to different cost bearers: citizens and firms, public budget, or society at large.

The findings are based on a review of the literature, a nationally representative household survey of users of healthcare services, and in-depth interviews with practitioners and experts in the sector. Alongside this qualitative and quantitative primary data collected to develop this report, the study also drew on administrative data, and secondary survey data (the East Africa Bribery Index and National Integrity Survey).

Findings:

Payment of bribes: The need to pay bribes or give gifts to healthcare providers leads to costs for patients that impact on their ability to meet living costs. Given that it almost certainly leads to some patients being unable to access treatment or unwilling to access treatment in a timely manner, this may have led to worsen healthcare outcomes, especially in the future. These costs are likely to fall more heavily on poorer households, who already have worse health outcomes and resources that allow them to pay formally and informally (bribes).

Absenteeism of Health Workers: Absenteeism leads to direct annual losses of more than UGX495 billion to the state budget in terms of "wasted" payments for salaries to healthcare workers. However, the extent of such loss is difficult to quantify, partly because rates of absenteeism vary in different types of healthcare facilities and among different staff categories and ranks. Research on the causes and drivers of absenteeism suggest that healthcare workers are often absent because they need to earn extra income from other sources to compensate for low or delayed wages from healthcare employers.

In addition, absenteeism leads to additional costs for patients who cannot access healthcare because workers are absent. There may also be indirect costs for patients in terms of potential detrimental effects on confidence in the healthcare system and willingness to travel to clinics and hospitals for treatment.

Theft or embezzlement of medicines and equipment: This is a major form of corruption by healthcare workers that leads to losses to the budget, in that medicines have been purchased which are not then delivered, but also has an impact on patients' livelihoods, since they are frequently forced to purchase medicines on the black market despite that they are entitled to receive then free of charge. This can potentially leads to negative health outcomes as patients may buy substandard or falsified medicines or may not be able to afford to access medicines at all.

Corruption in the procurement of medicines, infrastructure and services: This is regarded as common and leads to a number of costs. Most directly, it causes losses to the state budget since favouritism in the allocation of contracts tends to mean poor value for money for the state as prices are inflated and poor-quality goods delivered. The study provided significant evidence of contracts failing to be delivered, or of goods, works and services being delivered to substandard quality or with major delays. Meanwhile the quantitative analysis suggests that at least UGX3.5 billion is lost due to procurement corruption in the healthcare sector annually.

The study shows that the total cost of bribery in the healthcare sector in Uganda amounts to nearly UGX 670 billion. This estimate is likely to be a conservative as some costs of corruption are in-kind and others are difficult to measure. According to this conservative estimate, the eradication of corruption in healthcare in Uganda could result in annual savings equal to 25% of government spending on health.

Chapter

One: Introduction

1.0 Background

There is broad agreement that Uganda faces considerable challenges related to corruption, and that healthcare is among the most affected public sector services. According to the Fourth National Integrity Survey Report[1] 2020, bribery, absenteeism and ghost workers impact public service delivery. These practices constrain access to essential health services, affecting people's everyday health, wellbeing and life chances. Data suggests that the problem is growing, an increasing share of Ugandans report that they pay bribes and state that corruption has worsened. In particular, the Fourth National Integrity Survey found that 76% of respondents believed that corruption had increased in the 12 months prior to the survey[2].

Every year for several decades, 180 countries participate in what is known as the World Corruption Perception Index in which countries are scored and ranked against each other depending on the perceived prevalence of corruption in the country. The score and ranking of Uganda in the recent years has been poor. The score in 2019 was 28 out of 100 while in 2020 it was 27 out of 100 and the ranking was 137 out of 180 in 2019 and 142 out of 180 in 2020.

Despite being a clear challenge to the Uganda's sustainable development, comprehensive estimates of the extent and cost of corruption in the healthcare sector are lacking. With support from the German Government, through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmBH, the IG commissioned a study to the estimate the cost of corruption in the health sector in Uganda.

1.2 Objective of the study

This research sought to strengthen the evidence base to underpin policy and institutional reform to reduce corruption in the healthcare sector in Uganda[3]. It provides an estimate of the prevalence and costs of corruption in healthcare provision in Uganda, an examination of who is most vulnerable to healthcare corruption, and the drivers and mechanisms underpinning corruption in the sector. It gives detailed and specific evidence about the reasons why bribes are paid and requested in different contexts. This can enhance stakeholder dialogue and government accountability the population, and support institutions as they assess the impact of targeted anti-corruption measures and seek to adopt more effective measures in addressing it.

1 IGG National Integrity Survey 2020
2 IGG National Integrity Survey 2020
3 https://ace.globalintegrity.org/wp-content/uploads/2020/12/GI-ACE-Research-Paper-SFRA.pdf

1.3 Healthcare system of Uganda

Uganda has a pluralistic health system, dominated by an interdependent formal public and informal private system of biomedical care, coupled with high demand for western pharmaceuticals (Adome et al., 1996, Hutchinson et al., 2015, Kitutu et al., 2017, Peiffer et al 2018). Biomedical care is divided between state-owned institutions, non-governmental organisations (NGOs), faith-based organisations and not-for-profit facilities; private hospitals and clinics; and medicine sellers who operate from pharmacies, drug shops, grocery stores and marketplaces (Adome et al., 1996, Mogensen, 2005). Medicine sellers are overwhelmingly the most popular distributors of many pharmaceuticals, in particular anti-malarial medication (Rutebemberwa, Pariyo, Peterson, Tomson, & Kallander, 2009).

Public-sector care is organised as a tiered system of Health Centres run and governed at national and district level. District health teams run the health facilities from general hospitals down to Health Centres II, with political oversight by the district chairperson (Bukenya and Golooba-Mutebi, 2020). Table 1 shows how these Health Centres are organised. The higher levels of care, regional referral and national referral hospitals, are semi-autonomous and report directly to the Ministry of Health. As Table 1 shows, Health Centre II provide access to basic diagnostics and care largely delivered through nursing staff. Inpatient services are available at Health Centre III with the services on offer becoming more complex in higher level facilities. A community healthcare also exists alongside these higher levels of care, which is delivered by untrained or minimally trained, unpaid volunteer community health workers who are organised into Village Health Teams and who often work in the areas in which they live. Sometimes referred to as a Health Centre I, the VHTs are not considered part of the formal health organisation although they are guided by a comprehensive policy (Uganda Ministry of Health, 2010).

At national level, alongside the Ministry of Health, National Medical Stores (NMS) procures, stores and distributes medicines and medical supplies to the public sector in Uganda and Joint Medical Stores which is a not for profit venture that supplies the not for profit private sector. The National Drug Authority (NDA) established in 1993 is the regulatory agency which oversees the development and regulation of pharmacies, drug shops and drugs in the country, the importation, exportation and sales of pharmaceuticals and controls drug quality. In 2009 the President also established the Health Monitoring Unit (HMU) in the Office of the President to address widespread stock outs of drugs (Baez Camargo, 2012 in Peiffer et al, 2020) and to “monitor national health service delivery with the intent to improve and address prevailing gaps” (HMU, 2018 in Peiffer, 2020). The Unit has a small staff of approximately 20–30, and it has been credited with some success in curtailing informal payments (Baez-Camargo, 2012; Peiffer et al 2020).

Table 1. Types of healthcare facilities in Uganda.

Level	Population	Services offered
Health Centre II	5000	Preventative, promotive and outpatient curative services and emergency maternal deliveries
Health Centre III	20,000	All above and inpatient, maternal and laboratory services
Health Centre IV	100,000	All above and emergency surgery, blood transfusions, lab services (should supervise level 2 and 3)
General hospital	500,000	As above addition, provides surgery, obstetrics, and Gynaecology, Paediatrics, family medicine, and X-ray
Regional referral Hospital	2,000,000	As above and specialized services (Medicine, Surgery, Obstetrics, and Gynaecology, Paediatrics, ENT, Ophthalmology, Orthopaedics, Anaesthesia, Pathology, Psychiatry, Dentistry, and Community Medicine. Have specialists, train nurses, have a blood bank, do basic and applied research and provide engineering services to facilities in its health zone
National Referral Hospital	10,000,000	As above, but more comprehensive and advanced than regional hospital. For instance, national hospitals offer advanced diagnostic services such as MRI and CT scans; they have super-specialists, and train doctors, pharmacists, dental surgeons, and graduate nurses and carry out advanced research."

1.4 Funding and Corruption in the Health System

In the 2000s, a series of health-sector reforms were introduced in Uganda to tie budgets to results. These created sector-wide approaches to ease coordination, to enable long-term planning for better resource allocation and to improve access to care (Croke, 2012, Tashobya et al., 2006). As these policies began to yield results, however, the number of corruption scandals occurred involving the management of the Ministry of Health – notably the Minister then Jim Muhwezi and Deputy Ministers Mike Mukula and Alex Maugisha (Kirya, 2011, Peiffer et al 2020). Furthermore, the lack of personnel and funding for multiple newly created districts did not allow to fully enable effective local government leadership and the successful management of the health system (Croke, 2012).

The problems with leadership exacerbated already existing problems in the sector, notably underfunding of commodities and a lack of personnel. Health-sector spending continues to be low, at 7.2% of the national budget and fulfils approximately 50% of the financing needed to provide minimum healthcare for all of Uganda's population (Uganda Ministry of Health, 2020, Peiffer and Armytage, 2019). Government per capita health expenditure averaged USD 9 between 2010 and 2020, far below the recommended USD 271 per capita estimated to achieve UHC by 2030 (Kwesiga 2020). Unsurprisingly, out-of-pocket payments therefore account for 40% of Uganda's total health expenditure (Kwesiga, 2020). According to one of the interviewees, this often reflects long-term deficiencies of the health system

("The sector is in turmoil. The infrastructure is lousy and has been deteriorating since the Idi Amin days (1971-1979). Health facilities are without basic requirements, and are understaffed." Interview 6, Global Fund).

This disconnect between public demand and state capacity is thought to incentivise and create greater opportunities for corruption, with citizens often willing to pay extra to service providers in order to receive better treatment. Accordingly, public service providers have opportunities to abuse their position, for example by soliciting bribes or other in-kind payments. Thus, they often face incentives to engage in such behaviour partly because of weaknesses in state capacity and governance. In addition, human resource management is poor in the Ugandan healthcare sector, with limited prospects for career progression, inadequate performance feedback and poor rewarding mechanisms (Lutwama et al, 2013).

Corruption in the public healthcare sector imposes a range of costs on citizens as well as on the public budget. There are numerous types of low-level corruption with transactional and non-transactional nature (e.g. absenteeism) that pose financial and in-kind costs on the users and on the health system (as described in the previous section on corrupt practices in public healthcare).

Nevertheless, the government has had some success in acting on corruption in the health sector (Peiffer and Armytage, 2019). The Health Monitoring Unit has managed to reduce the number of ghost workers and bribery – falling from almost 50% of people who had contact with the health sector in 2010 to 25% in 2015 (Peiffer and Armytage 2019, Peiffer et al 2020).

Chapter Two:

Conceptual Framework

2.0 Definitions: Typology of Corruption

One of the most commonly used definitions of corruption is: “the misuse of public office for private gain” (Rose-Ackerman, 1978). A more recent definition - “abuse of entrusted power for private gain” is widely used by leading international anti-corruption institutions such as Transparency International[4]. This definition locates corruption within a bureaucratic context where the roles and responsibilities of public officials are clearly set out and rules are clear, and it is therefore possible to identify what constitutes misuse or abuse. Despite that in low- and middle-income countries this is not always the case, the definition remains useful as it focuses the attention to the institutional context within which corruption occurs.

Corruption can occur at different levels. Members of the general public are most likely to confront ‘low-level’ bribery of among public officials who perform routine tasks and this is sometimes referred to as petty corruption, despite its profound consequences for individuals. Such service-level or grassroots corruption typically involves informal payments or giving small favours or gifts to officials, with bribery being the most common form of corruption at this level with street-level bureaucrats choosing whether to act (Bardhan, 2006; Charoensukmongkol and Moqbel, 2014). At the other end of the spectrum, high-level, grand corruption usually involves nationally powerful actors who abuse their control of state institutions to expropriate the state’s wealth[5]. Grand corruption is inherently difficult to fight as its perpetrators often design and control the system in which they operate.

The Uganda Anti-Corruption Act of 2009 defines nine types of corrupt acts that can be committed by public officials, including: the direct or indirect solicitation or acceptance as well as the offering or granting of any monetary goods, benefits, or any other form of gratification for themselves or another person or entity, in exchange for any act or omission in the performance of their public functions; the diversion or private use of any property, monies or securities belonging to the State; the direct or indirect offering or giving, promising, solicitation or acceptance of any undue advantage to or by any private sector representative or promising of any undue advantage to or by any person who asserts or confirms that he or she is able to exert any improper influence over the decision making of any person performing functions in the public or private sector; the fraudulent acquisition, use or concealment of property derived from any of the acts referred to in this section; the participation of any kind and manner to commit any of the acts referred to above; any act or omission in the discharge of his or her duties by a public official for the purpose of illicitly obtaining benefits for himself or herself or for a third party; or neglect of duty (Uganda Anti-Corruption Act, 2009

4 https://www.transparency.org/en/what-is-corruption

5 https://www.unodc.org/documents/NGO/Grand_Corruption_definition_with_explanation_19_August_2016_002_1.pdf and https://www.transparency.org/en/corruptionary/grand-corruption

- shortened version of Article 2)[6].

As both the international as well as the Ugandan definitions show, the act of being corrupt is commonly understood as an interaction between different actors where a transaction involving the exchange of resources, and/or favours takes place to subvert the formal rules and provide benefits to those who participate in the transaction. However, there can also be non-transactional misconduct that can also bring benefits, often carried out by individuals, such as "shirking" (Gates, Scott & John Brehm, 1997) or sabotage. These include embezzlement, fraud, absenteeism ("neglect of duty"), and payment of "ghost workers". While not conventionally considered corruption, it can be argued that they represent rent-seeking. Thus, in this study, we include these types of misconduct as well to paint a comprehensive picture of wrongdoing in the healthcare sector that can be considered as an abuse of entrusted power for private gain. Table 2 presents our distinction between corruption at the different levels.

Table 2. Low-level vs. high-level corruption

Low-level corruption	High-level corruption
• transactional: bribery (including extortion) • non-transactional forms committed by individuals: embezzlement, fraud, absenteeism, ghost workers	• grand / institutional corruption (usually transactional, but can also involve embezzlement)

2.1 Corrupt practices in Public Healthcare

According to Vian (2008), corruption risks in the health sector are particularly high due to the asymmetry of information (e.g., about diagnostics and treatment needed) and uncertainty surrounding the demand for services (e.g. level of utilisation, disease patterns and implications for planning services), as well as the diversity of actors involved, which includes policy-makers, patients, service providers, and technology or drug suppliers (often private) interacting in complex ways. These information asymmetries may often reduce accountability and increase corruption risks. Furthermore, the public healthcare sector typically involves transactions or negotiations with a large number of private sector providers as well as large amounts of public funds (Savedoff, 2006; Vian, 2008).

A number of issues increase corruption risks relating particularly to procurement of drugs, equipment, and supplies in the health sector (Lantham, 2001; Kassirer, 2006), including:

- the high costs of constructing hospital infrastructure, meaning that procurement of such items is very lucrative for companies and prone to corruption;
- the need to purchase expensive and complex technical equipment, where accountability and oversight is weakened by a lack of technical expertise;
- and the need to buy a very diverse list of medicines, which creates reliance on companies in the pharmaceutical sector which have major market power.

6 https://www.ulrc.go.ug/system/files_force/ulrc_resources/anti-corruption-act-2009.pdf?download=1

In addition, other areas of risk include:

- Regulatory approval**.** Procedures to grant licences to sell certain medicines or to put certain products on the "essential medicines list" so that the state is required to purchase them are prone to influence through corruption, bribery and lobbying.
- Oversight of pharmacies. The sale and dispensing of medicines is regulated by the state, but the regulatory authorities often lack the capacity to perform this function adequately and there is also a risk that regulators may be bribed to overlook the sale of substandard, falsified or unlicensed medicines (Hamill et al, 2021).
- Accreditation. Public officials may also abuse their power when conducting accreditation of health facilities, staff, or products, potentially overlooking or inadequately checking documentation, which may be false, allowing for example, for poor quality infrastructure and appointing unqualified persons.
- Healthcare provider abuse of power**.** Interactions between patients and healthcare providers are characterised by major information asymmetries, which create potential for bribery and extortion. This can manifest as doctors ordering inappropriate or unnecessary medical procedures in order to gain financially: accepting bribes, not showing up for work, or using public funds to finance private practice.
- Theft of medicines. Healthcare providers sometimes steal medicines that have been purchased through public procurement but re-sell them to patients who should have received them free of charge.
- Gift giving and gratitude payments. In many countries, there is a widespread practice of gift giving or making gratitude payments to healthcare workers to indicate one's appreciation (Gaal and McKee, 2005). In Uganda, the survey conducted by the Basel Institute on Governance[7] in 2017 showed that 24% of respondents indicated that they would give unsolicited gifts in public facilities. Furthermore, the same report[8] suggested that rejecting such gifts might be considered rude for a service provider. Yet there is also a risk that the common practice of payments leads to discrimination against patients who cannot pay or deters patients from seeking consultations because they cannot afford to purchase a gift. The lack of a clear distinction between a bribe and a gift or gratitude payment is important to acknowledge.

The corrupt practices in the public health sector are summarised in Table 3 below.

7 https://baselgovernance.org/sites/default/files/2019-01/earf_uganda_country_report.pdf, p. 12
8 Ibid., p. 16

Table 3: Corrupt practices in public healthcare

- Policy-making (e.g. capture by special interests)
- Procurement (e.g. infrastructure, drug provision)
- Recruitment of staff (e.g., forgery of documents)
- Finance and control (e.g. leakage of budget)
- At health facilities (e.g. informal payments, overcharging, absenteeism)
- Medical products (e.g. theft of drugs, provision of substandard medicines)
- Absenteeism (undue absence from work)
- Presenteeism (staff is present at work but not providing care)

2.2 Corruption Drivers

There are many explanations as to why corruption occurs, and we outline below some major explanations. Note that these also imply different approaches to tackling corruption.

2.2.1 Corruption as a principal-agent problem

Corruption has frequently been conceptualised as a principal-agent problem. As it applies to the health sector, citizens are often cast as the "principals" (who have entrusted their power to government institutions), and healthcare workers and public officials working in the sector as the "agents". The agents, healthcare workers and health officials, possess more information about the sector than the principals (asymmetric information), and can make decisions about how resources are spent or what treatments to give (discretion). Through the principal-agent theory lens, corruption occurs when healthcare workers and officials exploit the fact that the public is unable to monitor or sometimes understand the decisions that are made in the sector. Consequently, strategies to fight corruption inspired by a principal-agent theory explaining the emergence of corruption, commonly focus on decreasing discretionary power of agents (healthcare workers and public officials working in the sector) and establishing better monitoring, oversight and accountability mechanisms (Klitgaard, 1988).

2.2.2 Corruption as a collective action problem and particularism

Corruption has also been thought of as a collective action problem, which recognises that often many different groups of actors in government, civil society and the private sector fail to coordinate and mount an effective anti-corruption response. These actors may not find it in their own interest to fight corruption, or they may feel that the costs of coordination are too high (Persson, Rothstein & Teorell, 2013). Many societies are characterised by particularism, meaning that people's treatment by the state depends on their position in society. Therefore, corruption in particularistic societies essentially reproduces the existing structures of inequality and uneven distribution of power (Mungiu-Pippidi, 2006). Strategies to fight this type of corruption require a more comprehensive approach that focuses on fostering anti-corruption norms and building coalitions against corruption – for example, by educating people or creating tools fostering collective action and promoting political alliances to support it.

2.2.3 Corruption as a problem-solving functionality

Corruption can also be understood through the functionality it fulfils, in other words, "the ways in which corruption provides solutions to the everyday problems people face, particularly in resource-scarce environments, problems that often have deep social, structural, economic and political roots" (Marquette & Peiffer, 2021, 2018). This understanding of corruption relates to the idea that corruption is a necessity for many people to fix daily problems. For instance, underpaid healthcare workers might consistently be absent from their workplaces in order to get additional earnings for living[9]. There can also be system failures that lead to corrupt practices – for example, one interviewee from this study mentioned that understaffing forces some schools and health facilities to hire staff illegally to fill gaps and be able to continue to provide services[10].

With that, it is important to acknowledge that, for individuals or groups, using corruption for solving problems requires strong informal networks. If informal networks are weak, corruption cannot provide solutions. Accordingly, problem-solving functionality of corruption is not accessible for individuals and groups with weak informal networks or outside of such networks (e.g., marginalized groups).

The corruption functionality approach helps to explain why corruption persists, arguing that, based on daily experiences, people rely on corruption (be it small-scale bribery or grand corruption) to solve the social, economic or political problems they face. Strategies to fight corruption following this approach focus on better understanding which functions corruption fulfils and which do and do not need to be filled by anti-corruption efforts. Through this lens, corruption is seen as a logical mechanism, which arises to solve problems that are associated with a broken system – a symptom of weak governance, rather than a cause of it.

This approach also highlights the idea that tackling corruption can have unintended consequences or "costs" that may leave people even more vulnerable. Reducing corruption, without fixing the broken system, can result in more harm than good, because it would take away a mechanism people relied upon to navigate that system and solve immediate problems they face (Peiffer, Armytage, Marquette & Gumisiriza, 2020). To reduce corruption, from the functionality perspective, it is necessary to address the underlying problems that corruption is trying to solve (like improving access to scarce resources or navigating a security issue) rather than addressing the manifestations of corruption directly.

2.3 Costs of corruption

Corruption in the different areas of health system operation (provision of healthcare services, regulation etc.) can impose costs in various ways. In order to cover the diverse forms of cost impacts of corruption, we differentiate between direct costs and indirect costs which may be monetary or non-monetary. As some types of corruption costs may represent an income for the counterpart of the corrupt transaction, we also have to separate our cost of corruption accounting by cost bearers, namely 1) public budgets including the Ugandan government but also international donors, 2) public service users and citizens, and iii) the society at large.

9 http://ti-health.org/wp-content/uploads/2019/03/IgnoredPandemic-WEB-v3.pdf, p. 5-6
10 Interview 3.

Direct costs include all those costs that can be directly attributed to corrupt acts. This can be either a direct cost to the public budget (hence in this case to the Ugandan government or donor governments providing aid to the Ugandan budget); or a direct cost to the citizens who are required to pay a bribe or purchase a gift to get a public service. In the latter case, the cost involves a transfer of money from citizens to public officials, thus the cost to the former constitutes an (approximately) equal income to the latter, which would make the net cost to society zero. It is important to keep in mind that there is income from corruption in case of transfers such as bribes, and thus, we measure the total direct cost of corruption to the service user or citizen.

Indirect costs include all those that are only indirectly attributable to the corrupt act and harder to express in precise monetary terms. Indirect costs constitute a dead-weight loss to society, in other words they do not benefit anyone but create a deviation from the optimal resource allocation of the public budget and more broadly in the wider economy. Hence, they represent the net social cost.

In sum, there are three types of costs incurred by different groups:

1. Cost to the public budget (direct cost)
2. Cost to citizens (direct cost)
3. Net social cost due to dead-weight loss (indirect cost)

To illustrate this distinction of direct and indirect costs to the public budget, citizens and public officials, several example are given in Box 1.

Box 1: Real-life example to illustrate different types of corruption costs.

A car driver gets stopped on the road by a policeman for speeding. Instead of charging the official fine of 100,000 UGX, the policeman accepts a bribe of 30,000 UGX and lets the driver go. In this case, the direct cost of the corrupt act to the public budget equals the loss of the value of the fine - 100,000 UGX - , the cost to the citizen is the amount of the bribe - 30,000 UGX - (while he saved 70,000 UGX compared to the official fine), and the income of the policeman equals the bribe - 30,000 UGX. In case the driver was a genuine traffic offender, these are the main costs (although one could argue that letting a traffic offender go for a third of the official fine will not prevent him from speeding again, hence making roads unsafe which would be an indirect net social cost). However, if the policeman was abusing his position to solicit bribes, e.g. targeting potentially wealthy drivers and hence stopping a car on a pretence without any offence actually having occurred, this act also carries an indirect net social cost. The policeman's act of abuse of power and extortion means that he does not fulfil his duty to guard the safety of traffic and punishing actual offenders, which may go unnoticed or unpunished, leading to less safe roads which is a dead-weight loss to society. In addition, this carries a potential additional indirect cost of reducing citizen's trust in public institutions.

Table 4 below outlines the types of corruption in healthcare provision that are examined in this report.

Table 4. Overview of types of corruption in healthcare provision considered in this study.

Type of corruption		Cost category		Cost description	Cost bearing actor	Estimation methods
Level	*Nature*	*Cost type*	*Cost form*			
Low-level	Transactional	Direct	Financial	Cost of bribing health-care provider	Citizen	literature and policy document review, admin data, survey, interviews
Low-level	Transactional	Direct	Financial	Loss of treatment due to not affording the bribe	Citizen	literature and policy document review, admin data, survey, interviews
Low-level	Non-transactional (absenteeism)	Direct	Financial	Loss of government salaries to healthcare worker paid despite absence	Public budget	literature and policy document review, admin data, survey, interviews
Low-level	Non-transactional (absenteeism)	Direct	In-kind	Loss of healthcare treatment to user	Citizen	literature and policy document review, survey
Low-level	Non-transactional (embezzlement)	Direct	Financial	Loss to public healthcare funds	Public budget	literature and policy document review, admin data, interviews
Low-level	Non-transactional (embezzlement)	Direct	In-kind	Cost to physical and mental wellbeing of patients.	Citizen	literature and policy document review, admin data, survey, interviews
High-level	Non-transactional	Indirect	In-kind	Lost productivity and economic growth due to low health of the workforce.	Society at large	literature and policy document review, admin data

Chapter Three:

Methods and Data Analysis

3.1 Focus of the Analysis

Corruption in the provision of public services, in particular in healthcare provision, can impose costs in numerous different ways. This report focuses on the types of corruption in public healthcare and classifies them according to the following characteristics:

- Level at which **corruption occurs**: lower or higher office.
- **Nature** of **corruption**: transactional or non-transactional.
- **Type of cost:** direct or indirect.
- **Form of the cost:** financial or in-kind.
- **Individual or group bearing the costs:** citizens, public budget, society at large.

This report utilizes a mixed-methods approach, with the aim to construct as comprehensive as possible a measurement of low- and high-level incidences of corruption in Uganda, given data constraints.

The scope of the study covered available data in 2019 and also included interviews with experts, practitioners and relevant public officials from Uganda and beyond. A national survey on the extent and cost of corruption in health sector in Uganda and the qualitative information was conducted from Febraury to December 2021 using research interviews and focus group discussions.

3.2 Administrative data

3.2.1 Red flag methodology to analyse procurement data

We compiled a dataset on national spending – which includes sectoral procurement data on healthcare and analysed it to identify corruption risks and estimate the costs of these risks. The dataset contains 50,000 contracts covering the years 2015-2020; it was obtained from the government's open data portal[11] in prior research and updated for this analysis.

Corruption proxies measurable in procurement data were used to analyse the public spending structure, the prices paid for procurement, and the quality of delivery (in terms of cost overrun after contract award). The details of the red flag methodology are explained in Annex A. The estimation of the costs of corruption risks in procurement builds on and extends our award-winning Corruption Risk Tracker methodology[12] (winner of the IMF Anti-Corruption Challenge in 2020) and covers almost all procurement spending, which amounts to about 10% of annual Ugandan GDP[13].

11 https://gpp.ppda.go.ug/#/public/open-data/
12 http://www.govtransparency.eu/index.php/2020/10/08/the-imf-anti-corruption-challenge/
13 https://ti-health.org/content/modelling-reform-strategies-for-open-contracting-in-low-and-middle-income-countries/

3.2.2 Other government administrative data

Building on the records of the Inspectorate of Government (IG) of Uganda and its access to government documents, we combine our primary dataset with government administrative data wherever possible. This allows us to refine and validate the estimates of types of corruption and costs specific to the functioning of the Ugandan government health and education sectors, e.g., in the case of absenteeism in the healthcare sector.

3.2.3 Review of literature and policy documents

We collected, systematised and reviewed the existing literature, corruption analyses and previously collected data. This guided our research design and supported our own data collection and analysis but also filled crucial gaps and enabled validation of the findings. For example, there is a large body of literature discussing drivers of absenteeism among healthcare workers in Uganda (see, for example, Zhang et al, 2021; Tweheyo et al, 2017; Nyamweya et al, 2017).

3.2.4 Interviews

We conducted 39 in-depth semi-structured interviews with experts, practitioners, relevant public officials, and users of public healthcare. The interviews were used to collect evidence about the mechanisms through which corruption occurs, to guide our quantitative analysis of the extent of corruption and its costs, and to help contextualise and interpret our findings. Qualitative research also allows to identify the different forms of corruption and gain a perspective on their costs where a direct quantitative measurement is not feasible. For example, insights into state capture or legal corruption in the regulatory such as pharmaceutical company lobbying or legislators' conflicts of interest help to identify the social cost of these practices.

The interviews were designed as in-depth semi-structured conversations of at least 60 minutes using a topic guide with open-ended questions. Interview data was analysed in phases, first by identifying key types of corruption and associated narratives, and then, by deductive coding following the explanatory approaches outlined in our conceptualisation presented above.

3.2.5 Household survey

To estimate the prevalence and cost of corruption at the point of service delivery, we designed and conducted a nationally representative face-to-face, household level survey. The sample for the survey consisted of 1600 respondents. We used the Uganda Population and Housing Census 2014 as the sampling frame. A more detailed description of the survey methodology is provided in Annex B.

To ensure that our study identifies users and non-users of healthcare services (or those in their immediate family or household), we used a screening question at the beginning of the interview - whether a member of a household had a significant illness episode or was pregnant in the 6 months period prior to the survey. If a respondent's answer was "yes" - she/he was asked about these experiences of corruption during service delivery. Service users,

for instance, were asked about the type of illness or condition they or their family members had, the type of facility visited, if they or their family members had been approached to pay a bribe, the value of any bribes paid, and the motivation for paying a bribe, if paid. If a respondent reported that they of their family members did not use health facilities, the interviewer continued with questions about why this was the case. The survey sought to establish factors affecting demand for health services and reasons for not using a service (e.g. not being able to afford to make a payment or absenteeism at a health facility). The inclusion of respondents that did not use healthcare services in the sample was crucial to accurately estimate the costs of non-provision of services due to corruption, building on prior research suggesting that demands for bribes may prevent some members of society from accessing healthcare (Bakeera et al, 2009).

3.2.6 Secondary survey data

In addition to the survey data we collected, this analysis draws on datasets from prior representative surveys including the East Africa Bribery Index and National Integrity Survey. These sources were used to validate our estimates of the costs of bribery in the healthcare sector and were developed using the data collected through the household survey and incorporating insights from expert interviews.

Chapter Four:

Study findings

4.1 Costs of giving bribes or gifts to healthcare providers

The first direct, transactional type is the cost of a healthcare user (patient) bribing a healthcare provider (doctor, nurse etc.) for the delivery of a service or to receive (better) treatment that should be delivered free of charge or for a fixed lower fee. The National Integrity Survey (2019) found that 29.5% of the survey respondents paid for services at public health facilities, of which 13% reported that this was an unexpected additional charge and 44% classified the payment as an unofficial fee. East Africa Bribery Index (2017) suggests that prevalence of bribery in the healthcare sector is 19%.

In our household survey conducted for this analysis, 20% of respondents who had been in contact with the health sector within the previous 6 months reported that they or someone from their household had been asked to pay a bribe, give a gift, pay extra money (but not an official fee) or do a favour for a healthcare worker. In all, 97% of this group reported that they had paid money as a bribe. Using this estimate together with the level of interaction with the sector (80% of total sample), and the median size of a bribe (UGX 20,000) results in a total estimated cost for citizens due to bribery in healthcare of UGX 140.8 billion or EUR 32.9 million.

In the qualitative data, the costs of corruption and rule breaking (e.g. absenteeism, inappropriate referral to the private sectors, and the lack of drugs) were categorised by the respondents as *direct financial* costs (e.g. having to pay certain amount to access to essential services) but also *indirect costs*, including non-financial. The latter have received less attention in the literature, but the study suggests that the respondents are sensitive to how corruption and rule-breaking affect their health outcomes – causing worsening illness and disability due to decreased utilisation and even leading to death. Covid-19 has exposed further fragilities in the health system that often made the occurrences of different forms of corruption and their effects more visible:

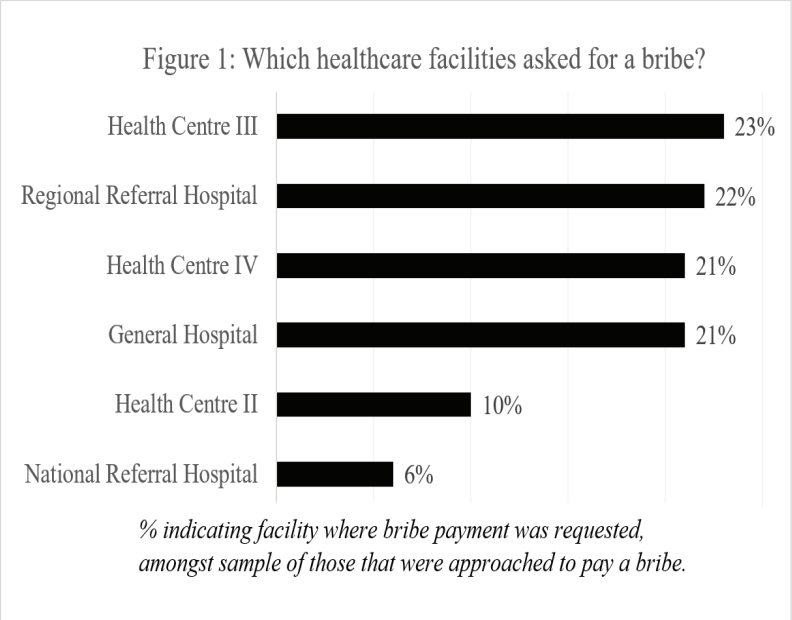
> *"The biggest costs especially related to ideological corruption is catastrophic expenditure by the common man. Covid-19 has been very good at exposing these cracks where everyone was in the pressure cooker and we all had to go to Mulago. The ultimate cost of corruption was death of covid-19 patients: over 2,000 in this wave alone. Why? Because the oxygen plants that were procured by a pharmacy linked to the high-profile family could not meet the demand. There is need to identify professional suppliers. We have biomedical engineers in Uganda being trained at Makerere University. They should be part and parcel of the procurement process and maintenance service contract."* (Interview 37, Uganda Medical Association)

Costs are also perceived to affect respondents' wellbeing and ability to meet basic needs – for them and their families. Respondents report a loss of income (often severe) depletion of resources that may be needed for non-health spending ("*catastrophic expenditure by the common man… the denial of the ordinary man, especially in the rural areas, to access the so-called free healthcare.*" Interview 37, Uganda Medical Association). These diverse costs demonstrate that corruption and rule breaking may have constrained demand for and utilisation of essential services, particularly among the poorest (and rural) populations. These also affect respondents' lives, wellbeing, sense of security and trust in public institutions which may explain why costs appear to be more pronounced in the qualitative research than in the survey which focused mainly on direct costs (e.g. bribes).

4.1.2 Requests for bribes by facility

Using the survey data further analysis of bribery rates according to the types of healthcare facilities, medical conditions and motivations to bribe were conducted. With respect to facility types, amongst the respondents who were approached to pay a bribe, the highest percentage - 23% - reported that a bribe was requested at Health Centres III (sub-country level facilities with no inpatient treatment, also providing maternity services), and 22% reported that a bribe was requested at a Regional Referral Hospital (regional-level facilities providing specialized services). In contrast, less than 1% of these respondents reported being approached for a bribe by Village Health Teams (volunteers selected by their communities to provide health information and help community members to find available health services), and 6% report being approached for a bribe at a National Referral Hospital (national-level facilities providing specialized services that are more comprehensive and advanced than in regional hospital, and employing highly qualified specialists).

In contrast to Health Centre II and the Village Health Teams, Health Centre III, IV and the regional and general hospitals all more complex, in-patient services (see Table 1) including maternity care and in the case of Health Centre IV, regional and general hospitals for long term or chronic conditions. These offer a range of services, types of medicines and increased time at a facility and so represent more services and commodities that could be paid for illicitly. Unpublished research from Tanzania suggests that health workers elicit bribes in maternity services at night and that relatives often seek to pay additional bribes to health workers during these times to ensure that patients are well cared for (Ramesh, 2021). Health Centre II provide limited services, which are further reduced when rapid tests and medication are unavailable and so limit the potential for exchange.

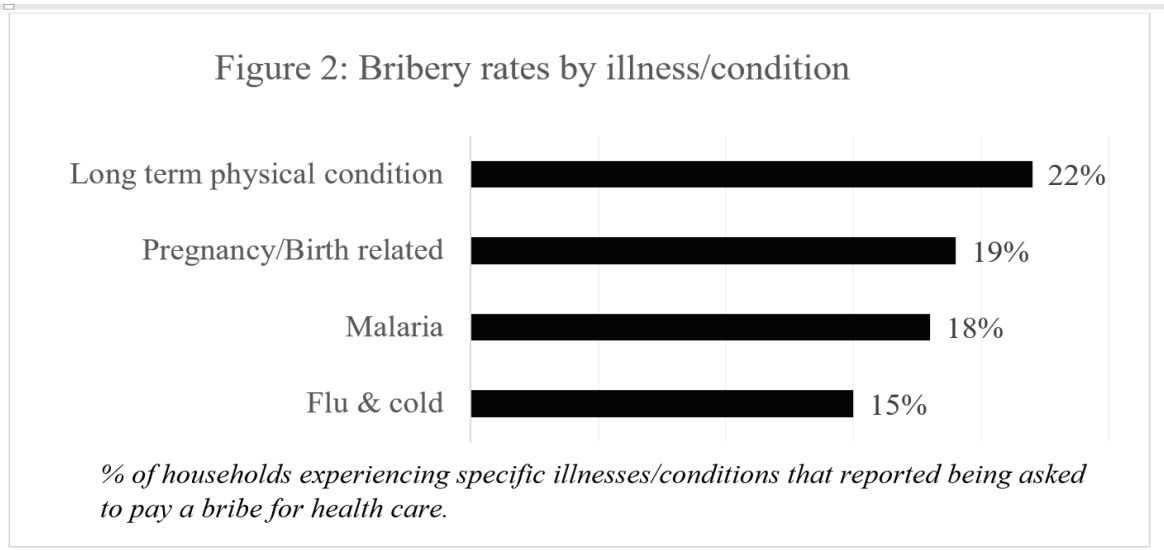


Note: Not included: private clinic (2%), village health team (<1%), and DKs/refusals. Respondents could choose more than one facility.

4.1.3 Requests for bribes by medical condition

56% of the household survey respondents reported that someone in their household had malaria in the last 6 months, while 32% reported that someone had flu or a cold in the household. 13% reported someone in the household having a long-term physical condition, and a similar percentage - 12% - said someone in the household was pregnant or had birth-related health needs. For all other conditions asked about - ulcers (8%), diarrhoea (6%), trauma/injury (4%), infectious disease/fever (4%), skin related issues (4%), hypertension (3%), Covid-19 (2%), and measles (1%) - less than 10% of our sample reported experiencing them in the last 6 months.

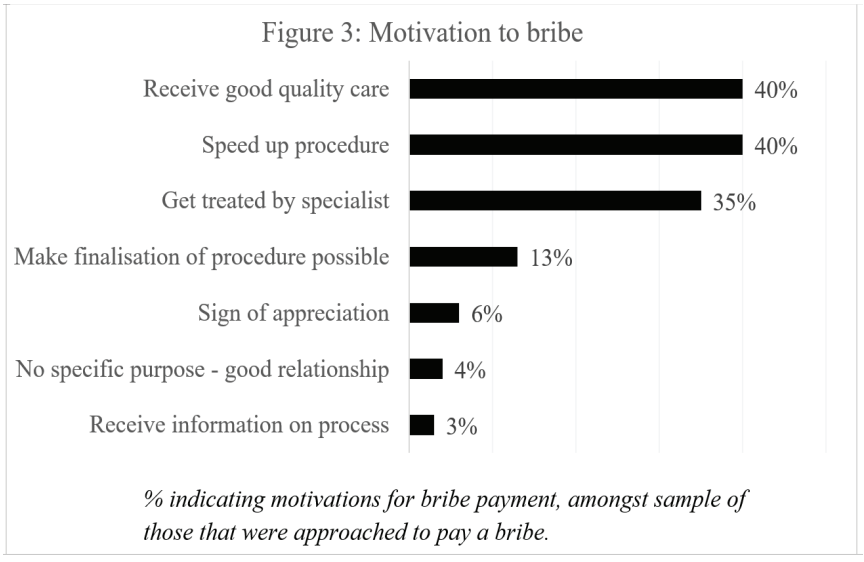
Despite the varying rates at which households were impacted by health conditions, the odds of being asked to pay a bribe appears strikingly similar across different conditions that were experienced. Just over a fifth (22%) of households where someone had a long-term physical condition report being asked to pay for a bribe in the last 6 months. Similarly, households where someone had malaria (18%) reported being asked to pay a bribe in the last 6 months to a health professiona. Surprisingly, just under a fifth of households where someone was pregnant or had birth related health needs (19%) which has been associated with higher payments elsewhere. In contrast, 15% of households where someone experienced cold and flu reported being asked to pay a bribe in the last 6 months. It may be the case that sufferers of flu and cold were better able to avoid seeking medical attention for their ailments in the public sector, and possibly self-treat, with lower rate of requests for bribes than those households that experienced conditions which are more likely to require medical attention.



Note: Above bribery rates only estimated for those illnesses that at least 10% of the sample reported experiencing in the last 6 months.

4.1.4 Motivations for bribery

The most frequently cited motivations to pay a bribe were to receive good quality care and speed up a procedure. 40% of the sample of those who were approached to pay a bribe indicated that these were motivations for bribe payment. 35% of respondents who were asked for a bribe reported that seeking treatment from a specialist was a motivation for bribe payment. While the practice of gift giving or making gratitude payments is thought to be widespread in the sector (Gaal and McKee, 2005), it is noteworthy that only 6% of those who were approached to pay a bribe cited using bribery as a sign of gratitude.



Note: Respondents could choose more than one motivation.

Amongst households approached for a bribe and impacted by pregnancy or malaria, the most often cited motivation for bribery is to get good quality care, followed by the desire to speed up a procedure, and then to secure treatment from a specialist (Table 5). Similarly, for those households that experienced flu and cold and were asked for a bribe, the most often cited motivations for bribery were to speed up a procedure and to get good quality care,

which was again followed by attempting to secure treatment from a specialist.

The picture is somewhat different for those households impacted by long-term physical conditions. Perhaps reflecting the specific medical challenges that a long-term physical condition presents (e.g. the need for specialist care across different levels of the system), it is not surprising that for those households that were approached to pay a bribe the most cited motivation was to seek treatment from a specialist, with the next cited motivation as trying to speed up a procedure. Just under one-fifth of these households cited being motivated to bribe by trying to secure good quality care.

Table 5. Top 3 Motivations to Bribe by Illness/Condition

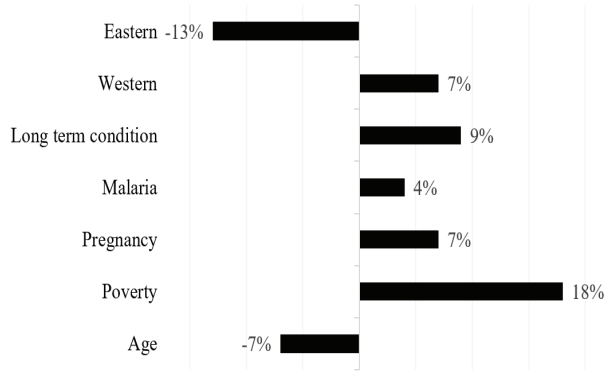
	1st motivation	2nd motivation	3rd motivation
Pregnancy/Birth	Get good quality care (44%)	Speed up procedure (38%)	Get treatment from specialist (27%)
Malaria	Get good quality care (42%)	Speed up procedure (38%)	Get treatment from specialist (36%)
Flu & Cold	Speed up procedure (46%)	Get good quality care (46%)	Get treatment from specialist (36%)
Long term physical condition	Get treatment from specialist (47%)	Speed up procedure (38%)	Get good quality care (18%)

Note: Percentage of households with particular conditions who listed various motivations for paying bribes. Motivations are only reported for those illnesses that at least 10% of the sample reported experiencing in the last 6 months.

4.1.5 Factors associated with bribery

Using a logistic regression, the study examined what factors are most significantly associated with being a part of a household that has received a request for a health-related bribe, as reported in the survey. This analysis therefore points to patterns of disproportionate vulnerability amongst the population for health-related bribery. Figure 4 summarises the significant findings by displaying the estimated change in probabilities of being approached to pay a health-related bribe associated with a change in value of the variables that were found to be significantly associated with being approached to pay a bribe (full logistic regression findings are found in Annex E).

Figure 4: Associations with Bribery



Estimated shift in probability of being approached to pay a bribe associated with a minimum to maximum change in associated variables.

Note: Results are derived from a logistic regression and related post analyses. Shifts in predicted

probability are displayed for those variables that were found to be statistically significant (p-value <0.05) association with bribery. Other variables included in the analyses: gender, household size, experienced flu or cold, being an urbanite, Central regional residency; Northern regional residency was treated as the baseline for the analyses.

Poverty is estimated to have a strong association with requests for health-related bribes. Compared to households that have not gone without food, income, cash, or electricity in the last year, Figure 4 shows that being a part of a household which has gone without these necessities is frequently associated with a sizable 18 percentage point greater probability of being approached for a health-related bribe than better-off groups. This worrying finding is consistent with a literature that finds that the poor in Africa are disproportionately vulnerable to health and education sector bribery (e.g. Peiffer & Rose, 2018; Justesen & Bjornskov, 2012, 2014; Kankeu and Ventelou, 2016).

Those households with someone who is experiencing a long-term health condition are also estimated to have a 9 percentage point greater probability of being approached for a bribe, than those that do not. Similarly, pregnancy is associated with a 7 percentage point greater probability in being approached for a bribe, while having malaria is associated with a 4 percentage point greater probability. Having flu or cold, in contrast, was not significantly associated with health related bribery request patterns.

The analysis also show that age is significantly associated with whether a health related bribe is requested of users or their household members. Compared to being 55 or older, people between 18 and 24 years old have a 7 percentage point greater probability of being a part of a household that has been approached for a bribe. Gender, surprisingly, was not found to be significantly associated with health-related bribery request patterns. Given that many women take on care-taking roles, being a woman has been found by others to be significantly associated with bribery patterns in the health sector (Peiffer & Rose, 2018). Similarly, the analysis did not find any difference between those who live in urban and rural areas, with respect to their likelihood of being approached with a request for a health-related bribe.

Finally, geographic region seems to also matter. Residents in the Eastern Region were estimated to have a 13 percentage point lesser probability, compared to residents of the Northern Region, of being approached for a bribe, while residents in the Western Region were estimated to have a 7 percentage point greater probability, compared to residents of the Northern Region, of being approached for a health-related bribe. In contrast, residents of the Central Region were not significantly different from Northern Region residents in their vulnerability for health-related bribery requests.

4.1.6 Value or direct costs of bribes

Survey results also allow the study to estimate the value of bribes across the sector. Highlighting the high variation in amounts paid, the average value of bribes paid by households was UGX 106,000 (approximately 27 Euro), while the median value was UGX

20,000[14] (approximately 5 Euro). To put this into context, of those survey respondents who report paying for healthcare in the past 6 months, just under one-quarter report paying between UGX 10,000 (approximately 2.50 Euro) and UGX 50,000 (approximately 12.50 Euro) for healthcare and one-fifth report paying between UGX 50,000 and UGX 100,000 over the past 6 months. A further one quarter report paying between UGX 100,000 and UGX 300,000, and one quarter report paying above UGX 300,000 for healthcare over the last 6 months. Only 5 percent report paying under UGX 10,000 over the past 6 months.

The highest median bribe value was reported by those who had to bribe at a National Referral Hospital (UGX 40,000 or 10 Euro), followed by bribery at Regional Referral Hospitals (median of UGX 30,000 or 7.50 Euro). The lowest median bribe value was reported by those who had to bribe at a Health Centre II (UGX 6,000 or 1.50 Euro). This suggests that the amount that can be charged is related to the complexity of the services on offer at the health facility, with the highest bribes paid in facilities offering the most complex services, most comprehensive range of diagnostics and most senior staff on offer at the National Referral Hospital.

The median value bribe paid amongst three of the most commonly cited medical conditions was identical. UGX 20,000 (5 Euro) was the median bribe paid amongst those who reported paying a bribe and had a flu and cold, malaria, or a long-term physical condition. For those who engaged with the health sector because of pregnancy or birth related issues, the median bribe paid amongst those who reported paying a bribe was slightly lower - UGX 15,000 (3.80 Euro).

The median value of bribes paid also does not seem to vary much by motivation. The median bribe paid was UGX 30,000 (7.50 Euro) amongst those who reported paying a bribe to 1) receive good quality care, 2) get treated by a specialist, 3) make the finalisation of a procedure possible, 4) speed up a procedure and 5) receive information on a process. In contrast, for those who reported paying a bribe as a sign of appreciation, the median bribe paid was lower - UGX 10,000 (2.50 Euro).

4.1.7 Loss of treatment because of bribery and unofficial fees

Another cost arising from there being a widespread expectation that bribes or gifts must be paid in order to obtain healthcare includes the inability to obtain treatment due to patients not being able to afford to pay a bribe or any unofficial fees that have been demanded or are expected. The impact of these in-kind types of costs on the health of individuals as well as society can be severe. A higher national level of perceived corruption is associated with poor national level health outcomes (e.g. Azfar & Gugur, 2007; Witvliet et al., 2013), as well as specific outcomes such as increased mortality rates of under-five year olds (Hanf et al., 2011; Björkman & Svensson, 2009).

The household survey in this study suggests that the need to pay bribes can put a significant financial strain on households. 9% of the total sample reported having to cut other expenses in order to pay a bribe for health-related services, while 7% had to borrow money to afford a bribe. 7% of the household survey sample reported that someone from their household had been unable to pay or had refused to pay a bribe for healthcare. 3% of the total sample

14 Note that all bribery cost estimates are based on responses from 261 respondents on questions about the value of bribes given to health facilities from households.

reported being unable to receive treatment because they refused or were unable to pay a bribe. However, less than 1% of the sample reported avoiding, or not attending, a healthcare facility when it was needed because they could not afford bribes.

Applying household survey's finding of 4% of the total sample not receiving care due to bribery enabled the study to estimate a monetary value of loss of treatment due to bribery and unofficial fees. Using the average government health expenditure per capita (excluding expenses on health system administration) – UGX 18,948[15] (4.5 Euro), it is estimated that the loss to is nearly UGX 33.3 billion or EUR 7.8 million.

It is important to acknowledge that this estimate cannot fully capture the cost of not delivered/ avoided services due to bribery since the impact of the lost treatment on the health of individuals as well as society can be severe and this, in itself can increase the costs in the long term. For example, service users who are unable to pay a bribe in the early stages of their illness may suffer more severe or persistent complications and the burden of costs can increase down the line.

4.2 Losses owing to absenteeism

Government employee absenteeism is a widespread problem in the healthcare sector in Uganda. The 2014 and 2012 IG report on Corruption Trends in Uganda using the Data Tracking Mechanism found that approximately one out of every two health workers is absent on any given day at healthcare facilities. One study (Zhang et al, 2021) conducted in six rural districts in eastern Uganda in 2011-2012 found that, on average, no health worker was present in the lowest-level public health clinics on 42% of all days monitored; but this number was less than 5% in higher-level public hospitals and private facilities. This shows that absenteeism represents a cost to the public budget in terms of wages paid to absent healthcare workers. If one out of every two health workers are absent daily, the cost in terms of "wasted" salary payments amounts to UGX 495.1 billion or EUR 115.9 million. This estimate is based on administrative and audit data from the Ugandan Ministry of Health on the number of health workers (47,929) and the average daily salary (UGX 32,881).

17% of the household survey sample reported having experienced a situation where they or a family member of theirs did not get treatment because a doctor or nurse in a public healthcare facility was absent. Of those reporting such occurrences, 65% percent experienced it once or twice in the past 6 months, and 27% - several times, while 6% - often. Aside from patients not being able to access treatment, absenteeism also imposes a strain on those who do show up to work, increasing their stress levels and potentially undermining their own commitment to the job and retention. This further undermines the operation of the system as a whole.

In addition to the costs for the public budget, absenteeism in the healthcare sector leads to numerous costs for citizens and society at large. In particular, absenteeism makes essential health-related services less accessible for citizens. Furthermore, experience of absenteeism can also deter individuals from attending clinics when they need help, particularly if they need to travel long distances. In a context where private healthcare is the best option for

15 http://library.health.go.ug/sites/default/files/resources/NHA_FINAL%20-UGANDA-1%20FY%202014-15_2015-16%20final%20%20%202018-1.pdf , p.49

users to secure timely and good quality treatment, many healthcare workers prefer to work shifts in private healthcare facilities and earn extra money rather than working their shifts in public facilities, where salaries are often very low, and subject to delays. This worsens the experience of patients at public facilities who, owing to the absence of staff, have to wait longer for services and often receive less attention from the healthcare workers.

While absenteeism is problematic for a number of reasons, in Uganda it is particularly concerning given the very poor ratio of health workers to population. The World Health Organization recommends a minimum ratio of 33.45 health workers per 10,000 people, Uganda has 7.42 health workers per 10,000 people (WHO, 2018 in Peiffer, 2020) and as of 2015, 30% of health posts were unfilled (Ministry of Health, 2015 in Peiffer et al, 2020). Another distinct but related aspect is presenteeism, whereby staff is present at their post but do not provide care as expected at that type of facility (Interview 37, Uganda Medical Association). Absenteeism affects different staff categories differently, and according to some respondents is more prevalent among support staff, for example clinical officers and nurses (Interview 57, Senior Clinical Officer and In-charge, Health Centre III).

It is important to acknowledge drivers of high rates of absenteeism in healthcare and education in Uganda. For example, long delays in paying wages to healthcare workers are common, which may prompt healthcare workers to justify their requests for bribes or not attending their posts while receiving their government salary. Health workers may need to work in other jobs or subsistence farming to maintain their families. As one interviewee reported,

> "*I went to visit Kiboga Hospital. The Chief Nurse was working in her garden at 9am. She was supposed to be at work every day starting at 8 am. When she asked her why she was still not at work at 9 am, she explained that she would not be able to survive without farming.*" (Interview 6, representative from National Medical Laboratories)

One study identified a range of systemic drivers for healthcare worker absenteeism including delayed or omitted salaries, weak workforce leadership and low financial allocation for workers' accommodation. The findings of this study resonate with multiple studies suggesting that absenteeism is driven by systemic and structural factors, such as insufficient and delayed salaries, weak leadership, low staffing creating work stress, lack of housing – with all these factors influencing individual healthcare workers' motivation and heightening a desire to seek supplemental income[16]. According to the NDA official interviewed, there are few incentives for clinicians in particular to work in the public sector:

> "*Let's first look at healthcare financing in Uganda. There are two ways through which it happens: public and private. In the public sector services are supposed to be free. When you go to a health facility, you're supposed to find there a clinician. Even at Health Centre III, you're supposed to find a doctor. But are the doctors there? If they are there, how are they motivated to do their work? What do doctors earn? What should take a doctor to work in Mbarara? Why should one remain there as a specialist? Are there good schools for his children? Is it the pay? Then there is the*

16 E.g.: Tweheyo R, Daker-White G, Reed C, et al 'Nobody is after you; it is your initiative to start work': a qualitative study of health workforce absenteeism in rural Uganda" BMJ Global Health 2017;2:e000455.

> *issue of numbers. Qualified people are available, but they are working in other fields. That explains why there are so many vacant positions throughout the health sector. Look at the health facilities. Are they functioning? Do they have labs or even the equipment they need?*" (Interview 5, Senior Official at the National Drug Authority)

The report echoed previous findings in the literature (Mwesigwa, 2015; Nyamweya et al., 2017; Tweheyo et al., 2017) that linked poor salary, a lack of accountability measures and the opportunity to moonlight in private facilities to widespread absenteeism in Uganda. One interviewee explained that district officials often feel unable to call absent health workers to account:

> *"On days like Thursdays, the In-charges are never at the health facilities. This is common even in Kampala. Go to Kiswa Health Centre (East Kampala). You will be lucky to find a doctor there. They work for two hours and run to their private clinics. They are engaging in competing business and moonlighting. That is to the detriment of their employer and citizens. The ministry had proposed mechanisms of holding them accountable, such as clocking in at work and not leaving until a certain time. We want to ask the Ministry why it did not follow through with this. There was an incident at the Health Centre IV (HC4) in one of the districts where the In-Charge was not at the Health Centre. He told the District Health Officer that he had other things to do. The problem is that it is difficult to fire government workers, which perpetuates impunity. What further worsens this vice is the lack of supervision from responsible authorities. The ministry and local government leaders do not supervise health workers (effectively). For example, there used to be a problem of stock-outs (still is in some areas). When we advocated for regular restocking, drugs started to expire because of moonlighting and hoarding of drugs*." (Interview 26, Uganda National Health Consumers Organisation)

The tiered system of organisation through which services are delivered is also meant to provide supervision of Health Centres and staff that the interviewee above described. The Ministry of Health official that we spoke to, however, explained that the supervisory mechanisms that could oversee and engage with health workers were not functional because of a lack of funds and inadequate management capacity.

> *"…regional referral hospitals do not have the resources to supervise lower-level facilities. Also, lower-level facilities do not feel they answer to regional referral hospitals. District Health Officers are supposed to supervise from Health Centres III (sub-country) through Health Centres II (parish) to health posts at village level. However, they also do not have the required resources. Supervision at this level is so thin that health workers in charge of these lower-level facilities very rarely see or interact with District Health Officers". (Interview 13, Ministry of Health)*

These findings suggest that the drivers of absenteeism are multiple and interrelated. Piecemeal interventions to retain health workers are unlikely to be effective in the absence of system-wide structures, policies and targeted actor incentives.

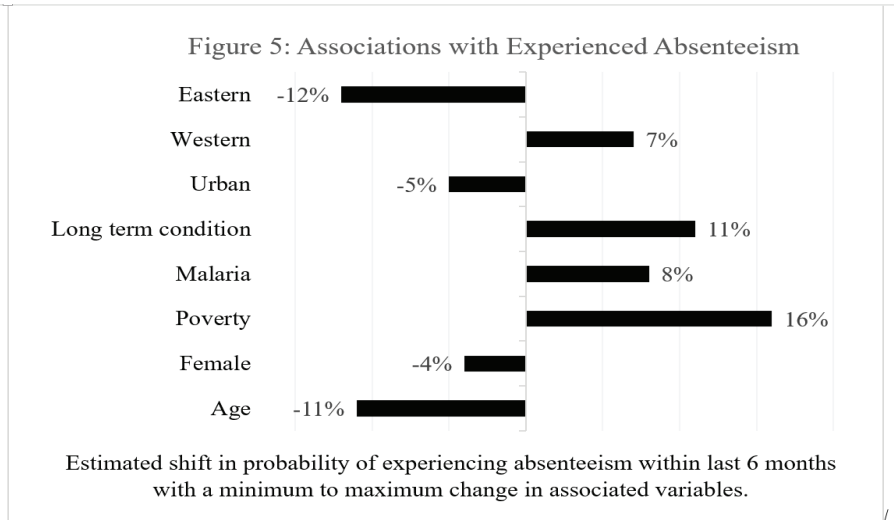
> *'It's a whole culture which can only be fought by the wider system' "As a lower-level manager, you can't do much about it", 'He is the relative of senior people. People who are recruited on this basis are difficult to manage". (Interview 57, Senior Clinical Officer)*

As a result of these structural drivers of absenteeism, there are indications that health workers act in networks to manage the workload, help each other, and avoid being sanctioned. Our

respondents referred to this as “organised absenteeism – people cover for each other”. (Interview 45, District Health Officer; Interview 49, Deputy Chief Administrative Officer)

4.2.1 Factors associated with experiences of absenteeism

Using a logistic regression based on survey findings (Annex E), the study examined what factors are most significantly associated with having experienced a situation where the respondent or a family member did not get treatment because a healthcare worker was absent. This analysis therefore points to patterns of disproportionate vulnerability amongst the population for experiencing absenteeism. Figure 5 summarises our significant findings by displaying the estimated change in probabilities of experiencing absenteeism in this way, associated with a change in value of the variables that were found to be significantly associated with being approached to pay a bribe (full logistic regression findings are found in Annex E).



Note: Results are derived from a logistic regression and related post analyses. Shifts in predicted probability are displayed for those variables that were found to be statistically significant (p-value <0.05) association with experiencing absenteeism. Other variables included in the analyses: household size, experienced flu or cold, pregnancy, Central regional residency; Northern regional residency was treated as the baseline for the analyses.

Poverty is once again estimated to have a strong association with experienced absenteeism. Compared to households that have not gone without food, income, cash, or electricity in the last year, Figure 5 shows that being a part of a household which has gone without these necessities frequently is associated with a sizable 16 percentage point greater probability of experiencing health-related absenteeism. Paired with the findings in Figure 4, this suggests that poorer families are not only more likely to be asked to pay a bribe for healthcare, but they are also more likely to miss out on care because of absent workers.

Those households with someone who has experienced a long-term health condition are also estimated to have a 11 percentage point greater probability of experiencing absenteeism, than those that do not. Similarly, malaria is associated with 8 percentage point greater probability in experiencing absenteeism. Having flu or cold or being pregnant, in contrast, was not significantly associated with health-related experienced absenteeism.

Age is significantly associated with experiencing absenteeism. Compared to being 55 or older, people between 18 and 24 years old have a 11 percentage point greater probability of being a part of a household that has experienced absenteeism. Paired with the findings in Figure 4, this suggests that younger people are more vulnerable to requests for bribes and to missing out on care because of absent health workers. Women in our sample report significantly less experienced absenteeism than men (by 4 percentage points), as do urbanites, who were found to have a 5 percentage point lesser predicted probability of experiencing absenteeism when seeking healthcare than rural residents.

Location is once again influential. Residents in the Eastern Region were estimated to have a 12 percentage point lesser probability, compared to residents of the Northern Region, of experiencing absenteeism, while residents in the Western Region were estimated to have a 7 percentage point greater probability, compared to residents of the Northern Region, of experiencing health related absenteeism. In contrast, residents of the Central Region were not significantly different from Northern Region residents in their vulnerability to health-related absenteeism.

4.3 Losses owing to embezzlement

Public healthcare facilities are supposed to dispense medicines to patients free of charge, based on supplies of medicines which the central National Medical Stores has bought through public procurement. Corruption risks arising in the procurement process are described in the next section, but corruption also occurs once medicines have been delivered to clinics and hospitals. As one interviewee described a case of what they perceived as gaming the system,

> *"as soon as medicines are delivered at the units, artificially high demand is created. Health workers use their people to pose as patients and prescribe large quantities of medicines which then end up in their own private clinics. This applies only to tablets and capsules and syrups, but not injectables."* (Interview 3, Head of a Civil Society Anti-Corruption Organisation)

However, high demand may also be created simply as part of the dynamics of a shortage economy. One interviewee commented that:

> *"Deliveries are sometimes in such small quantities that the drugs get finished […] given that users are usually aware that medicines have been delivered, which prompts them to rush to health facilities to be treated for various ailments "before the medicine gets finished". (Interview 7, Two officials of an anti-corruption agency)*

Another suggested that the temptation to steal drugs is high given the low wages of healthcare workers, as well as demand for medicines in neighbouring countries:

> *"You supply millions of dollars' worth of medicines, but you pay peanuts to the health workers who are entrusted with managing them. Drugs have been embossed, but it has not stopped pilferage. If anything, embossing has raised the demand for medicines smuggled out of Uganda." (Interview 5, Senior Official at the National Drug Authority)*

In addition, healthcare workers sometimes create artificial stock outs to facilitate the levying of illegal fees:

> *"Drugs are hidden and patients told that they are out of stock. However, those who pay illegal fees get them. In this, Health Unit Management Committee members are implicated." (Interview 3, Head of a civil society anti-corruption organisation)*

Many interviewees attributed these problems to inadequate systems for managing medicine stocks and distributing them, and to weak monitoring:

> *"In some government health units, there are no clinicians to prescribe, even if the drugs are available. And few people can do proper quantification. As a result, a lot of medicines delivered to health units expire before they can be used. [...] Informal drug shops and pharmacies tend to mushroom around hospitals. And health workers have business interests in many of them." (Interview 5, Senior official at the National Drug Authority)*

> *"A big challenge is the governance of health unit management committees (HUMCs). They are supposed to receive drugs, sign for them, and monitor their use. Monitoring does not happen." (Interview 6, representative from National Medical Laboratories)*

In terms of explanations for corruption, these accounts suggest a complex interplay of underlying socioeconomic drivers, creating incentives to steal, but also a lack of supervision of conduct, providing low-risk opportunities to engage in this type of behaviour. In other words, corruption may partly be a mechanism for coping with poverty, but is also facilitated by limited capacity and/or willingness to monitor and hold offenders accountable. Specifically on the latter, interviewees also mentioned a lack of sanctions for wrongdoing or enforcement of rules.

The costs of this kind of embezzlement are many. Patients do not get access to the medicines they need, and may be pushed towards buying medicines from informal suppliers, increasing the risk that the medicines are substandard and may be either ineffective or harmful. In addition, the experience of being unable to get medicines from the public health facility may lead patients not even to attend the facility in future, but rather to seek advice from local informal healers - this may mean that health problems are not diagnosed at a point when they could be easily treated, or that products recommended by informal healers cause harm. These scenarios can lead to high financial and social costs at a later point in time.

Those interviewees who were most familiar with the frontline service delivery (DHO and health workers), however, argued that the lack of availability of medicines in the health facilities was much more likely to be due to stock outs than theft and the pilfering of medicines.

> *"What drugs? We are in perpetual scarcity of drugs….we have never received enough drugs [and] you cannot steal drugs that are not there…they fail to send us enough drugs. The little they send get finished within two weeks and the next thing you hear is that there are no drugs in health facilities because they are being stolen." (Interview 32, District Health Officer)*

The purchasing of medicine and equipment from the private for-profit sector and sometimes from health workers working in the public sector for use in public hospitals and Health Centres is well described in the literature (see for example, Adome et al., 1996; Chandler et al., 2011; Hutchinson et al 2018, Hutchinson et al 2020, Mogensen, 2005). National level statistics show how the fiscal year 2019/2020, the Ministry of Health reported a drop from 53% to 46% in the numbers of health facilities having 95% availability of commodities (including essential medicines and health supplies, 49%; antiretrovirals, 33%; laboratory commodities, 46% (Uganda Ministry of Health, 2020). One of the health workers interviewed argued that stock outs are often misunderstood as being due to corruption or theft by health workers rather than a supply-chain problem, e.g. a failure to deliver medicines to the Health Centre.

> *"It's coming to almost 6 months since the NMS last made a delivery of drugs. Now that we have no drugs, if you tell someone to go and buy, they report to their counsellors. The counsellors then come here and quarrel and accuse us of stealing medicines. Some health workers bring in their own drugs and sell to patients. Patients then suspect that these are government drugs, which damages the reputation of the hospital. Health workers have been warned about this. Some direct patients which pharmacies or shops to buy from. They have been warned against this as well." (Interview 42, Healthcare worker)*

Other forms of embezzlement relate to use of public healthcare facilities for the provision of private healthcare services. This type of corruption can disrupt access to public facilities because they are being used by private patients who have not had to queue. It might also lead to a deterioration of public facilities and equipment which is not factored into the budget and investment planning. More broadly, the dual private-public system may create a situation in which patients do not seek treatment as required and sufficiently early because they anticipate and are deterred by high costs.

Moreover, where doctors are motivated by making money out of patients, this may lead to fake diagnoses and the prescription of unnecessary medicines. As one interviewee explained,

> *"One form of corruption at tertiary levels of the health sector is diagnosis of illness by senior doctors whose motivation is to make money. An example is the recommendation of surgery for patients whose illness is so advanced that surgery does not make sense, because it is bound to achieve nothing by way of prolonging the patient's life or improving its quality. [...] This usually happens with cancer patients who, because they live in rural areas and far from hospitals where quick measures can be taken..." (Interview 8, Senior official of an anti-corruption agency)*

This kind of corruption is likely to be a drain on the budget, if that is the source of medicines, or on a patient's resources, and it may cause harmful medical outcomes and social costs.

4.4 Losses owing to procurement corruption

Healthcare procurement is prone to corruption in all of the phases of the procurement cycle from planning to implementation and can cost the government and citizens significant amounts of money, as well as leading to harms and welfare losses.

Low-level transactional corruption in the procurement process, such as bribery, can lead to a loss of value-for-money as a public contract is awarded to a company that does not submit the best bid but is rather the highest-paying or best-connected actor. Where these corruption mechanisms happen on a larger scale and become institutionalised into a high-level type of corruption, the costs are likely to be significant to the public budget and society at large.

First, systemic transactional corruption in the public procurement sector is likely to affect the public budget by increasing procurement prices and providing poor value for money. Some interviewees reported that in construction of hospitals and other healthcare infrastructure, contractors are often selected based on bribes or/and political connections. As a consequence of weak supervision and enforcement of the initial contracts, the cost of such projects is inflated - typically in increased wages or material costs in the awarded contract or in re-negotiated costs during contract implementation.

Second, favouritism in the allocation of contracts typically leads to outcomes such as lower quality goods, works or services, delays in the provision of essential medicines, infrastructure and services, and the provision of the wrong types of goods, works or services, which do not meet actual needs. This constitutes a deadweight loss and thus an indirect cost to society. While in the Ugandan context there is no reliable data on contract implementation and the quality of procured goods and services available, the interviews provide information on such effects. The interviewees reported multiple cases when procured goods and supplies were of poor quality upon delivery, or were not delivered at all:

> *“Those who do procurement buy medicines which are about to expire because they are sold cheaply.” (Interview 4, Senior official at the Education Service Commission)*

> *“The auditor general’s report on Covid-19 funds shows the ministry of health didn’t follow procurement procedures. National Medical Stores does not supply the drugs requisitioned for or supplies less drugs than required.” (Interview 30, Anti Corruption Coalition Uganda)*

> *“there are many instances when medicines for which there is neither need nor demand are delivered (effect of the “push method” of delivery). These are easy to steal and sell, even smuggle across borders.” (Interview 3, Head of an anti-corruption organisation)*

The cost of corruption in healthcare procurement is measured using data analysis of public procurement data in order to analyse the public spending structure, the prices paid for procurement, and the quality of delivery (in terms of delays or cancellations) (Fazekas &

Kocsis, 2020). In particular, the study uses contracts data scraped from the publicly available Government Procurement Portal: GPP, and it filters this database to healthcare-related procurement using the relevant CPV[17] division ("33" - Medical equipment, pharmaceuticals and personal care products). It is important to acknowledge the limitations of this approach - the analysis omits procurement of goods and services by healthcare facilities that are not medical equipment, pharmaceuticals and personal care products. Therefore, the proposed sectoral loss of procurement spending due to corruption is likely to be a lower-bound estimate.

The Corruption Risk Indicator (CRI) is calculated as that which aggregates several corruption red flags such as there being only a single bidder, manipulation of the time period for which the tender is advertised, the use of non-competitive procedure types and other practices which are commonly used to hinder competition.

The red flags are validated based on two corruption proxies that are highly correlated with corrupt procurement practices; single bidding and the share of a single buyer's contracts that it awards to one supplier. It is predicted that relative prices for all the contracts under a counterfactual scenario where CRI scores are reduced to zero. The predictions are based on a linear regression model which controls for various price predictors such as contract sector, buyer type, tendering year etc. Using those predicted relative prices it is estimated that a counterfactual price for each contract under a "no corruption" scenario. The differences between those counterfactual prices and actual contract prices are assumed to be the cost of corruption on each individual contract. A detailed discussion of this methodology is provided in Annex A.

We find that losses to corruption in healthcare procurement in Uganda amounted to UGX 3.5 billion or EUR 811 thousand in 2019.

4.5 Other costs

This report also uncovered some forms of corruption where costs are difficult to estimate, which is discussed below.

In particular, the interviews revealed multiple cases of corruption in the recruitment of healthcare workers. Hiring of healthcare workers is affected by bribery introducing costs for both interns and experienced healthcare workers who have to pay in order to get positions.

With that, a fair competition in healthcare workers recruitments is also undermined by political inferences. Interviewees mentioned cases when politicians, especially on the local governance level, influenced recruitment to healthcare workers jobs securing positions for their relatives or other connected individuals.

17 CPV codes are a system of classification for public procurement which uses standardised vocabulary to help procurement personnel classify their contract notices consistently and to make it easier for suppliers and contracting authorities to find notices. The first two digits of CPV code identify the division (XX000000-Y).

There is also some evidence that unqualified staff are appointed to roles in healthcare clinics. There were reports of providers who pose as qualified staff - "*quacks or fake health workers – impersonating, stealing supplies, claiming to be doctors…* and*... providing a fake Covid-19 vaccine*" (Interview 33, Health Monitoring Unit) both in the public and private sectors. This may be motivated by a need to fill gaps but is often associated with corruption, with individuals being paid bribes to overlook the fact that documentary evidence of qualifications is not available, for example.

There are also issues relating to the provision of licences to pharmacies, with some interviewees arguing that licences can be purchased by outlets that do not meet requirements, or that inspectors can be paid off to ignore poor conditions for storing medicines or the selling of medicines that have expired. Research on this phenomenon in Tanzania suggests that inspectors overlooking failures in compliance are not necessarily motivated by private gain, but must also weigh up the potential costs to the community of closing down an outlet that sells medicines, even if potentially substandard ones, particularly in rural areas where suppliers are scarce (Hamill et al, 2021).

Chapter Five:

Summary of Key Findings

This report has outlined several types of corruption occurring in the healthcare sector in Uganda and analysed the various costs arising from each type.

First, the need to pay bribes or give gifts to healthcare providers leads to costs for patients that impact on their ability to meet living costs. Given that it almost certainly leads to some patients being unable to access treatment or unwilling to access treatment in a timely manner, this may have led to worsen healthcare outcomes, especially in the future. These costs are likely to fall more heavily on poorer households, who already have worse health outcomes and resources that allow them to pay formally and informally (bribes).

Second, absenteeism leads to direct annual losses of more than UGX 495 billion to the state budget in terms of "wasted" payments for salaries to healthcare workers. However, the extent of such loss is difficult to quantify, partly because rates of absenteeism vary in different types of healthcare facilities and among different staff categories and ranks. Moreover, research on the causes and drivers of absenteeism suggest that healthcare workers are often absent because they need to earn money or farm, to compensate for low or delayed wages from healthcare employers. Thus, it is not clear that their salary payments are wasted in the sense that, if the government were to pay only for the work it actually received, healthcare workers would presumably face worse poverty and absenteeism might be further exacerbated.

In addition, absenteeism leads to additional costs for patients who cannot access healthcare because workers are absent. There may also be indirect costs for patients in terms of potential detrimental effects on confidence in the healthcare system and willingness to travel to clinics and hospitals for treatment.

Third, embezzlement of medicines and equipment is a major form of corruption by healthcare workers. It leads to losses to the budget, in that medicines have been purchased which are not then delivered, but also has an impact on patients' livelihoods, since they are frequently forced to purchase medicines on the black market despite that they are entitled to receive then free of charge. This can potentially leads to negative health outcomes as patients may buy substandard or falsified medicines or may not be able to afford to access medicines at all. The possibility of embezzling medicines also distorts analysis of demand in the healthcare system, since hospitals and workers are incentivised to create strategic "stock outs" to maximise their opportunities to sell drugs unofficially, and thus the national drug procurement systems may become less efficient.

Fourth, corruption in the procurement of medicines, infrastructure and services is regarded as common and leads to a number of costs. Most directly, it causes losses to the state budget since favouritism in the allocation of contracts tends to mean poor value for money for the state as prices are inflated and poor-quality goods delivered. The interviews provided significant evidence of contracts failing to be delivered, or of goods, works and services being delivered to substandard quality or with major delays. Meanwhile our quantitative analysis suggests that at least UGX 3.5 billion is lost due to procurement corruption in the healthcare sector annually.

Limitations of the study

Researching corruption and its costs is difficult since most corrupt activities are hidden and those who are involved in them have an interest in concealing evidence. Individuals working in the system may have an imperfect understanding of the risks and/or may not accurately report them. Even experts on corruption rely heavily on the limited pool of corruption incidents that they observe as well as an assessment of governance risks that may facilitate corruption. As noted, any corruption-related costs are likely to be spread over time and thus may be inadequately captured in a cross-sectional survey. This research therefore has limitations which should be recognised when designing any policy interventions. However, the study sought to address these difficulties by using a range of methods to elicit different kinds of information from different types of stakeholders, seeking to provide an extensive mapping of the range of risks and costs, while recognising that prevalence and magnitude can only be estimated. Therefore, the proposed estimates represent a lower-down estimate of corruption costs in the healthcare sector in Uganda.

Chapter Six:

Interpretation and policy recommendations

The findings also reflect on the drivers or explanations of corruption, as set out in Section 3 - i.e., corruption as a principal-agent problem, corruption as a collective action problem, and corruption as functional given the circumstances of a particular context. The study provides interview evidence relating to each of these in turn and use this as a basis for formulating recommendations.

6.1 Corruption as principal-agent problem

Many of the interviews attributed corruption to weaknesses in monitoring and enforcement at different stages of policy implementation and service provision, suggesting that principals are indeed failing to control the conduct of agents. This was evident in many areas. Several interviewees mentioned this as a problem in procurement, particularly in the award stage where contracts are supposed to be implemented, and this applied to both contracts for building infrastructure and simpler contracts to supply goods. Others highlighted inadequate oversight by auditors or by regulatory agencies responsible for checking on the quality of medicines either when they are imported or when they are sold by pharmacies or other retail outlets.

Exploring in-depth the underlying drivers of weak control of agents by principals, our results suggest there are three main factors:

- weak capacity and resources of auditors, inspectors and regulators;
- conflicts of interest such that auditors, inspectors and regulators are compromised in exercising their oversight function; and
- outright bribery of individuals in these roles, to incentivise them to overlook or cover up problems.
- politicisation of the structures responsible for monitoring and rule enforcement

The weak capacity of those who are supposed to conduct monitoring is a commonly acknowledged problem in low- and middle-income countries. In the case of auditors, many interviewees suggested that they perform only a cursory assessment or focus only on paperwork that is provided, rather than digging deeper for additional - and perhaps missing - information or visiting to carry out inspections.

> *"the reason you find shoddy works in some places is that the people concerned don't monitor, they don't demand for details and documentation, or they don't seek to understand the documents where they require technical interpretation."* (Interview 49, Deputy Chief Administrative Officer)

This partly reflects a lack of adequate resources to conduct deep audits of all facilities, meaning that the deterrent effect of anticipating an audit is weak, because there is little chance of an individual unit being audited in a given year, and even then, the auditor or inspector may lack resources for a thorough investigation:

> *"auditors are not able to visit every health unit. They only sample some facilities. Then next time they sample others.* (Interview 67, Principal Assistant CAO, Health Sector)

> *"One of the main drivers of corruption is that nobody asks the right questions, and that people are not held to account."* (Interview 2, Former Deputy at the Inspectorate of Government)

The problem for auditors is exacerbated by the units that they are auditing sometimes making deliberate efforts to obscure information, as one respondent described:

> *"there is a lot of forgery of the information. They forge the number of patients, drugs, everything. They forge that medicine for example has gone to maternity services but when we come to audit, we go to maternity and find that they did not requisition for these drugs. They forge the records to account for medicines and supplies. They also forge numbers and say they had a higher number of patients than they actually had.'* (Interview 33, Executive Director at the Health Monitoring Unit)

However, another issue is that advance warning is given of inspections and audits, allowing for such deliberate manipulation.

> *"GMP inspection does not provide for surprise visits. People can wear their best clothes when NDA is coming, and then do what they want afterwards."* (Interview 12, Key actor in pharmaceutical products' importation and distribution)

Similarly, agencies with an explicit anti-corruption function lack the capacity to perform a thorough monitoring role.

> *"There is also the issue of resourcing and facilitating anti-corruption agencies. The IG cannot conduct asset verification. CIID cannot investigate grand corruption because they have no resources to conduct investigations. Corrupt people know that the IG has no capacity."* (Interview 3, Head of an anti-corruption organisation)

The only exception was the Health Monitoring Unit which appear to have promise and there are reports of this structure fulfilling its objectives. The Unit seems to be respected and to be able to achieve some impact on reducing corruption however it is unclear to what extent this is a result of their operation as they were active during a period of investment in the health sector - increase in salaries and the number of health workers.

> *"a policing unit that attempts to arrest health workers and any official who steals medicines and medical technologies."* (Interview 37, Former President of the Uganda Medical Association)

Another structure, the Health Unit Management Committees is meant to represent the community as in many other countries in Africa. However, the Committees are often politicised as their members are selected by the political leaders. As a result, according to one respondent:

> *"their relationship with staff is sensitive. Staff see them as some kind of "police". They always want to resist their actions."* (Interview 57, Senior Clinical officer)

Due to this, the HUMC may not always be able to act as intermediary between the community and the facility and help solve problems related to rule-breaking. Again, widespread awareness of the weak resources of anti-corruption investigators is likely to damage any potential deterrent effect.

Several interviewees also mentioned that inspectors responsible for checking that pharmaceutical providers are complying with regulations perform poorly. Again, part of the problem is that their resources are inadequate for the scale of this task:

> *"there are weaknesses in regulation, partly because of the sheer number of actors in the pharmaceuticals business. Compared to the limited human and financial resources available to the regulators, regulation leaves a lot to be desired."* (Interview 10, Pharmaceutical Society of Uganda, consultant, former NDA employee)

Research on inspections of pharmacies in Tanzania has found that inspectors often simply lack resources to travel to all of the areas where they are supposed to carry out inspections, while they also face ethical dilemmas as to whether it is appropriate to close down providers that have breached the rules because doing so would completely cut off access to medicines - even if they are substandard - particularly in rural areas (Hamill et al, 2021). This is likely to be a relevant issue in Uganda as well, and suggests that, although some interviewees recommend tougher enforcement as a solution to the widespread sale of substandard medicines, such a policy may not necessarily improve healthcare outcomes.

Another driver of corruption is poorly designed systems for monitoring. Several interviewees argued that monitoring is too centralised and that it would make sense to make it more

locally led, to improve understanding of the context. However, they also suggested that the Ministry of Health and mid-level agencies are reluctant to delegate, for fear of losing resources that are allocated for providing this oversight function:

> *"The practical way to do it would be for regional referral hospitals to do the supervision [of healthcare providers], because they understand the context better. It would be good if they had the resources to do the work. But now teams go out from the Ministry to lower-level facilities and don't even talk to regional referral hospitals. Currently, regional referral hospitals do not have the resources to supervise lower-level facilities. Also, lower-level facilities do not feel they answer to regional referral hospitals. [But...] At the Ministry there is vested interest in keeping the supervision function because doing so has resource implications. Giving it up implies loss of resources. To work well, however, the Ministry should retain only about 20 to 30 percent of supervision functions."* (Interview 13, Commissioner at the Ministry of Health)

Other interviewees argued that the problem was not lack of resources or poor organisational structures, but rather explicit payment of bribes to neutralise or co-opt the oversight function:

> *"When auditors come, they are first given envelopes (of cash) by Chief Administrative Officers who 'eat' money. Before he touches the first voucher, he asks 'how much are you offering?'. I would like to assure you that they are not auditing for this country. They arrive, and the first thing they do is bargaining: 'what are you offering?' [...] Before they even know what is in the vouchers, they start bargaining 'Otuwaayo mmeka?' (how much are you giving us)?"* (Interview 15, Senior administrative official)

One interviewee also described cases where pharmacy inspectors failed to sanction non-compliant pharmacies because the outlets were owned by high-profile individuals seen as "untouchable":

> *"There is a pharmacy (name withheld) which is owned by the wife of a well-connected individual, which acts outside the law. The NDA knows this, but they can do nothing about it. They [the pharmacy] do not renew their operating license [on time]. They stock medicines whose sale on the Ugandan market has never been authorized. These are usually very expensive drugs, such as cancer drugs which no one can find anywhere else. [...] NDA inspectors fear to go and inspect this pharmacy because they risk being arrested if they do. Indeed, one inspector was once arrested and locked up on trumped-up accusations of having been soliciting a bribe. He had gone there to ask about their license. He ended up in the custody of the anti-terrorism police. Since then, no one wants to go there."* (Interview 11, Key actor in the pharmaceuticals sphere)

While this is only one testimony from one individual, such accounts may reflect a more

common problem and might in themselves undermine compliance, by reducing the legitimacy of the regulatory system.

Recommendations:

- Improve the resources available to auditors and the IG so that they can afford to travel to inspect the implementation of procurement contracts and are not reliant on local hospitality when they do so, which could create conditions conducive to improper influence.
- Consider decentralising oversight of healthcare providers, but with proper (district and local-level) checks and balances on their power.
- Improve corporate beneficial ownership transparency so that the owners of pharmacies and government suppliers are disclosed, to enhance identification of conflicts of interest.
- Improve the rules – and monitoring of compliance – around conflicts of interest in public procurement, to avoid situations where contracts are given to firms that belong to district officials.

6.2 Corruption as a collective action problem

Corruption in the supply of medicines is a good example of a collective action problem. Many stakeholders are involved in collusive practices to corrupt the procurement and distribution of medicines, and many simply engage in individually rational practices which have the effect of corrupting the whole system. Our interviews provided overwhelming evidence of the complexity of corruption in this area. Problems start at the level of central government procurement of medicines, with Ministry of Health officials often colluding with pharmaceutical suppliers to award contracts that are overpriced or to purchase goods for which there is not real demand or need. In some cases, they have explicit conflicts of interest, owning the companies to which they are awarding contracts.

> *"Big-money contracts are awarded at ministry level. Bribery is at both the ministry and local government level. Some of the contractors are firms which belong to district officials, including Chief Administrative Officers, District Chairpersons..."* (Interview 3, Head of an anti-corruption organisation)

Procurement corruption is facilitated by the fact that there is no good system for assessing medicine needs among the country's different healthcare providers, and no efficient way of monitoring which medicines are used or matching medicines that are prescribed to patients.

> *"There is, for example, no system that tracks the use of medicines. It is not easy to know what has been used, how, on whom, and when."* (Interview 13, Commissioner at the Ministry of Health)

> *"The medicines are either stolen if they are requisitioned by a person who does not know the exact number of patients the facility serves. For example, we discovered that at [XXX] Health Centre in [YYY] district, the person who was requisitioning for drugs was seated in Kampala and had \no details, no records whatsoever about the number of patients the Health Centre handles."* (Interview 26, Head of Advocacy and Legal Officer at the Uganda National Health Consumers Organisation)

Medicines are then distributed to healthcare providers, at which point they are sometimes embezzled by local medical staff, who may re-sell them to patients - or direct patients to buy them from local pharmacies - after claiming that hospital stocks are empty.

> *"artificial stock-outs are created to facilitate the levying of illegal fees. Drugs are hidden and patients told that they are out of stock. However, those who pay illegal fees get them. In this, Health Unit Management Committee members are implicated."* (Interview 3, Head of an anti-corruption organisation)

> *"Informal drug shops and pharmacies tend to mushroom around hospitals. And health workers have business interests in many of them."* (Interview 5, Senior official at the National Drug Authority)

Recommendations:

- Improve the collection and sharing of data from healthcare providers about the need for medicines, to reduce the scope for manipulating demand and supply in ways that create artificial stockouts etc.
- Empower citizens to know their rights about which medicines should be available to them free of charge, so that they can challenge healthcare providers who claim that no medicines are available.
- Improve public procurement tenders for medicines, making them more open and competitive breaking up closed networks of collusive companies and officials.
- Improve post-award monitoring of procurement contracts, involving local communities receiving the goods and services procured.

6.3 Corruption as problem-solving functionality

The study found strong evidence of corruption emerging as a coping mechanism in response to weaknesses in the health system. These mostly related to absenteeism, recruitment of unqualified staff, and significant shortages of medicines and other commodities. Some examples follow:

> *"Understaffing forces some schools and health facilities to hire staff (illegally) to fill gaps in staffing."* (Interview 2, Former Deputy at the Inspectorate of Government)

> *"Then there is the problem of recruitment of staff. The process is so corrupt and bureaucratic. As a result, the Health Centres are so understaffed that even those implicated in corruption are irreplaceable. So you find that it is better for the facility to stay with a corrupt doctor than with no doctor at all."* (Interview 26, Head of Advocacy and Legal Officer at the Uganda National Health Consumers Organisation)

A slightly different issues relate to poor facilities for staff:

> *"We have only 5 staff houses for 5 staff. And the houses are in a bad state due to lack of renovation. One key challenge I face with staff is that people do not want to live in these houses. Some rent off the premises for themselves. Others live in their own home, including in Jinja (more than 30 kms away), and commute. This affects their regularity at work (absenteeism) due to lack of transportation. If you can't house someone and you can't pay them more, you have to allow them to be irregular at work."* (Interview 44, In-charge at the Health Center III)

However, another interviewee warned that the problem would not be solved only by providing better housing:

> "*Lack of accommodation does not necessarily contribute to absenteeism. Even those who live here come late to work or absent themselves. But fatigue is a factor in absenteeism. Health workers are overworked because of understaffing. When people are tired, you can't force them to report for work."* (Interview 57, Senior clinical officer and in-charge at the Health Centre III)

There are several problems related to recruitment and deployment of health workers. Due to shortage of funding for staff salaries in the health sector, the Ministries of Public Service and MOFPED have imposed caps on recruitment. This has created competition for posts, with reports of political interference from ministries, State House, district leaders in recruiting staff There is also gaming of the rules, with recruitment delayed to wait for particular people to apply or they are not well connected to powerful people. The pressure is exerted by kinship and political networks, and a respondent describes how:

> *"It is all political... []…Somebody will go to a Senior national-level figure who then calls you. Then there are people purporting to call from "Nakasero" (State House). It is particularly difficult when the caller is known to you. Some give you directives. They are put in a corner by relatives. Also, local leaders apply pressure on behalf of their children or relatives*". (Interview 60, Principal HR officer and Secretary to the District Service Commission)

The decentralisation, the growing number of districts and their autonomy ("districtisation") have posed further challenges for the enforcement of nationally agreed regulations and administrative procedures for human resource management. This is because health workers are hired locally, and this is affected by patronage. However, in some places there are

pockets of integrity with cases where managers had successfully resisted pressures from high-level district level officials.

Another issue mentioned several times relates to how individuals are allocated to jobs in different parts of the country, and in particular the practice of sending individuals to work in rural areas. This is driven by the need to staff facilities in these areas, which are typically very undersupplied, but the policy is very unpopular and is creating opportunities for corruption, with workers paying bribes or using personal connections to avoid being transferred. This is mainly with the help of political interference and is seen to distort staff incentives:

> *"They [politicians] always want to influence appointments, postings, and transfers. They push for their relatives to be posted in urban areas or "good places". It affects the morale of other staff. It interferes with the normal running of the sector."* (Interview 49, Deputy Chief Administrative Officer)

Recommendations:

- Simplify the process for recruiting staff, while at the same time improve verification of certificates and qualifications.
- Invest in improved accommodation for healthcare workers.
- Re-think the policy around how healthcare workers are allocated to clinics or incentivised to take jobs in rural areas – a possible solution is bonding (commitment to work in underserved areas in exchange of training opportunities or career advancement as implemented in many countries).

Annex A.

Red flag methodology to analyse procurement data

The study applied the 'red flag' methodology to analyse corruption risks and associated direct costs in public spending as represented by public procurement to the dataset on national spending. The dataset for analysis contained 50,000 public procurement records covering the period of 2015-2020, including sectoral procurement data on healthcare and education.

This methodology builds on corruption risk indicators and corruption cost estimates calculated using well-established methods (see, for example, Fazekas & Kocsis, 2020). The corruption risk indicators that we developed proxy corruption by identifying high-risk situations where open and fair competition has been curtailed in order to benefit a favoured firm. For example, when only one firm submits a bid on an otherwise competitive market and the bid advertisement period was only 1 working day, the chances are higher that tendering decisions were driven by corruption. We carry out a series of econometric tests identifying the best parameters for our indicators (e.g. how many days would count as a very short advertisement period in different contexts) and validating them. All these indicators are also confirmed by proven cases and economic theories of crime. In order to use a robust risk indicator, we aggregate several red flags into a composite score by simply averaging them (where 0 is lowest corruption risk and 1 highest); we call this the Corruption Risk Index.

For Uganda, the red flags that can be calculated based on the available data include:

- Non-open procedure type
- Lack of call for tender publication
- Short bid submission period
- Length of decision period
- Single bidder contract
- Spending concentration (by organisation, by year)

The methodology also links corruption risks to spending based on econometric modelling which estimates the price sensitivity of awarded contracts to corruption risks. It is predicted that the size of discounts offered by the winning firm compared to the auction reference price (that is typically the maximum budgetary allocation for a given purchase) based on corruption risks while controlling for year, contract value, main market, buyer location, and buyer type on the contract level. Finally, these models allow us to bridge our large-scale micro-level dataset with macro aggregates such as budget deficit and to offer different macro spending estimates based on different risk levels in each country and sector.

Annex B.

Survey methodology and questionnaire

Sample design

The sampling relied on the list of enumeration areas (EA) from the Uganda Population and Housing Census 2014 as a sample frame. There are a total of 79303 EAs with one area containing more than one hundred households in Uganda. The Census contains information about location, type (urban or rural) and population of EAs allowing for the stratification of the sample.

In order to get reliable survey results at national, regional (Central, Eastern, Northern, Western regions) and sectoral (healthcare and education) levels, we applied a two-stage stratified, clustered sampling. At the first stage, the sample was stratified according to 4 regions, namely Central, Eastern, Northern and Western. Next, each region was divided into urban and rural areas. As a result, we got 8 sampling strata. From each stratum, we selected EAs using probability proportional to population size (PPS) sampling procedure to ensure that the probability of a cluster being selected is proportional to its size.

The list of sampled EAs is provided in Annex D.

Selection of households

We used a random walk method to identify and select 30 households in each enumeration area. The random walk method was administered by the field supervisors with the assistance of local guides in each enumeration area.

The following steps were followed to select 30 households in each EA:

1. Identify and contact a village LC 1 official to support the team during field movements and in identifying selected households and community boundaries.
2. Determine the EA sampling interval (Nth) by dividing the number of households in the EA by 30.
3. Identify a central location within the EA like the market, a church, a health facility or the junction between two roads and use it as a starting point for household selection
4. The field supervisors selects a random direction from the central location by spinning a bottle. Thereafter, the field supervisor follows a road path in the selected random direction while selecting and assigning every Nth household to the data collectors.
5. On reaching the EA boundary (as guided by the village LC official), another random direction is determined again by spinning the bottle. This process is continued until when 30 households have been identified, selected and assigned to data collectors.

6. During times of uncertainly about which households to interview, the field supervisor uses a random selection process to decide which household to interview just by flipping a coin.

7. Interviewing stops when the required 30 households have been selected.

8. Two further attempts are made to interview residents who are not at home when initially visited.

Within a selected household, the household head aged 18 years and above or any available responsible adult is interviewed.

Inclusion criteria:
- Respondent must be resident of the household for at least 12 months.
- Respondent should be aged 18 years and above.

Exclusion criteria:
- Members of the household that are unable to provide consent.
- Exclude households that haven't had a household member suffering a serious illness episode or was pregnant in the last 12 months and that have no children in the age bracket of 6-18 years.

Sample size

The decision about sample size was made considering the factors of survey precision, operational and financial limitations of the project. To allow inferences about corruption prevalence both at the national level and among the four regions, the sufficient sample size is at least 1600 respondents or 400 respondents per region (with the design effect of 1.1). The above listed sample sizes are calculated for the estimated values of the key indicator near 50% to account for the maximum margin of error. An overall sample size of 1760 was estimated after inflating by 10% to account for the non-response.

Quality Assurance

In order to ensure quality of collected data, the following field controls were implemented:

- In order to verify that field teams were able to reach the selected entrepreneurs, we collected GPS coordinates for every completed site. We have carefully reviewed and visualized geographical locations of interviews to detect interviews with duplicate locations or outside of the particular EA.

- We randomly selected interviews for control, made call-backs and checked the fact of the interview, adherence to the survey methodology, and the correspondence of answers to key questions. Overall, nearly 10% of the sample were randomly included into the back check sample.

Annex C. Survey questionnaire

HOUSEHOLD QUESTIONNAIRE FOR THE NATIONAL SURVEY ON THE EXTENT AND COST OF CORRUPTION IN HEALTH AND EDUCATON SECTORS IN UGANDA (HEALTHCARE PART)

Pre-interview information

Date	
District	
Sub county	
Parish/Ward	
Village/cell	
Urban/rural	Urban=1 Rural=2 Peri-urban=3
Interviewer number	

Informed consent

Good morning/ Good afternoon

Hello, My name is _____. I am working with the International Research Consortium (IRC) - show the letter from the LCI. IRC is a research firm which was contracted by GIZ to conduct a survey about the extent and cost of corruption in the health and education sectors in Uganda. The study was approved by the TASO Uganda Ethics Research Committee and registered by the Uganda National Council of Science and Technology (UNCST).

The survey will target 1,600 households and your household is among those that were chosen randomly for the survey. Your views will be taken to represent views of many households who have not been selected to participate.

I would like to ask you some questions about your opinions on corruption in health and education sectors. These questions can take 25-35 minutes to complete. The information you give will be treated with strict confidentiality and your name will not be printed or used in any documents. You are free to accept or decline to participate in either study. The answers you give will not be shared with anyone outside of the study team. There is a small chance that someone could learn about what we talked about, however, we will do our best not to let this happen.

There are no questions that will make you feel uncomfortable or embarrassed. If I ask you any question that you do not want to answer, just let me know and I will go on to the next question. You can stop the interview at any time.

There is no direct benefit to you for participating in the study. However, the information we collect will help policy makers solve corruption challenges in health and education sectors.

Study participants will get feedback on the progress and findings of the study. You can also contact the Survey Team Leader for the study, Dr. Daniel Kibuuka Musoke on Telephone number- 0772587094 for information regarding the progress and findings of the study.

If you have any concerns about the study, you can contact the TASO Research Ethics Committee Chairperson - Dr. Adrian Jjuuko on Telephone number – 0782169505 and email - jjuukoa@gmail.com

Do you have any questions about the study or about your participation?

You can ask any questions you have about the study at any time.

Do you agree to participate in the survey?

NAME: _____ RESPONDENT AGREED_____

RESPONDENT DID NOT AGREE_____

My signature affirms that I have read the informed consent statement to the respondents (s), and I have answered any questions asked about the study.

INTERVIEWER'S NAME AND CODE: _____ Date:_____

_____

START TIME: HOURS MINUTE

A. Screening questions

A1. In the past 6 months, have you or someone from your household had a significant illness episode or was pregnant?

INTERVIEWER READS DEFINITION: *Serious illness episode is an episode when you or someone from your household needed medical treatment but not necessarily visited a health worker.*

1=Yes
2=No
9=Don't know
99=Refused to answer

A2. **If yes, please, specify (multiple choice).**

1=Measles
2=Diarrhea
3=Birth related
4=Skin
5=Ulcers
6=Flu & cold
7=Hypertension
8=COVID-19
9=Long-term physical condition (e.g. diabetes, hypertension, cardiovascular disease) 10=Trauma/injury
11=Surgery (for other than the above listed reasons)
12=Infectious disease with fever
13=Malaria
14=Depression or other emotional/mental problems
15=Other (specify)
9=Don't know
99=Refused to answer

A3. **When did a significant illness episode or pregnancy happen?**

1=Less than a month ago
2=2-3 months ago
3=3-6 months ago
4=More than 6 months ago

A4. In the most recent significant illness episode, did you or someone from your household receive outpatient treatment (did not stay overnight in hospital) or inpatient treatment (stayed overnight in hospital)?

1=Outpatient treatment
2=Inpatient treatment
3=Both
4=Neither of them
9=Don't know
99=Refused to answer

A5. **Is there a child of school age (6-18) in the household?**
1=Yes
2=No
IF YES, GO TO A6.
A6. **How many children of school age are in the household? (INTERVIEWER RECORDS A NUMERIC RESPONSE)**
IF ANSWER TO A1 AND A5 IS NO, END THE INTERVIEW; OTHERWISE, GO TO THE MODULE B.

B. Demographic and social characteristics of the household

Household respondent profile

B1. **What is the position of the respondent in the household?**
1=Head
2=Spouse of the head
3=Child of the head
4=Grand child of the head
5=Parent of the head
6=Sister/brother of the head
7=Nephew/niece of the head
8=Non-relative
10=Other (specify)

B2. **What is the nationality of the household respondent?**
1=Ugandan
2=Non-Ugandan

B3. **Is the household respondent male or female?**
1=Male
2=Female

B4. **What is the age of the household respondent?**
1=18-24
2=25-34
3=35-44
4=45-54
5=55and above

B5. **What is the marital status of the household respondent?**

1=Single
2=Married/living together
3=Divorced/separated
4=Widowed
5=Never married and never lived together
9=Don't know
99=Refused to answer

B6. **What is the highest level of education completed of the household respondent?**

1=None completed
2=Completed Primary
3=Completed Secondary
4=Uncompleted Vocational
5=Completed Vocational
6=Uncompleted Higher Education (University, College)
7=Completed Higher Education (University, College)
9=Don't know
99=Refused to answer

B7. **What is the main occupation of the household respondent?**

1=Farmer
2=Trader
3=Civil servant
4=Employee in the private sector
5=Owner/co-owner of private company
6=Free-lance worker
7=Housewife/inc. on maternity leave
8=Other (specify)

B8. **If you have a spouse, what is his/her main occupation?**

1=Farmer
2=Trader
3=Civil servant
4=Employee in the private sector
5=Owner/co-owner of private company
6=Free-lance worker
7=Housewife/inc. on maternity leave
8=Other (specify)

B9. **What form of communication is easily available to the household respondent?**
1=Landline telephone
2=Email address
3=Mobile phone
4=Public phone
5=None of the above
Household information
B10. **What is the household size by number?**
INTERVIEWER READS DEFINITION: Household us a group of people who normally eat and live together.
1=Less than 2
2=2-4
3=5-10
4=More than 10
B11. How many household members have regular income?
1=Less than 2
2=2-4
3=5-10
4=More than 10
B12. **What is the nature of the household dwelling - a place where you and your household members usually sleep?**
1=Permanent
2=Semi-permanent
3=Temporary
4=Other (specify)

B13. What is the type of the household dwelling?
(OBSERVATIONAL QUESTION: INTERVIEWER OBSERVES THE DWELLING AND RECORDS THE ANSWER BASED)
1=Traditional
2=Modern
3=Other (specify)
B14. What is the ownership of household dwelling?
1=Self/own
2=Owned by extended family
3=Rented
4=Borrowed
5=Other (specify)

Living conditions of the household

B15. In general, how would you describe the economic situation of the household this year, on the scale from 1 to 5:

5=Very good
4=Fairly good
3=Neither good nor bad
2=Fairly bad
1=Very bad
9=Don't know
99=Refused to answer

B16. In general, how would you describe the economic situation of the household this year compared to other people who live in your area, on the scale from 1 to 5?

5=Much better
4=Better
3=Same
2=Worse
1=Much worse
9=Don't know
99=Refused to answer

B17. And now, please imagine a ten-step ladder for your country where on the bottom, the first step, stand the poorest people, and on the highest step, the tenth, stand the rich. On which step of the ten steps are you personally standing today?

1	2	3	4	5	6	7	8	9	10	9	99
Poorest people					Richest people					Refused	Don't know

B18. Does your household have:

1=Electricity
2=Refrigerator
3=Radio
4=TV
5=Mobile telephone
6=Bicycle
7=Computer
8=Motorcycle
9=Car
10=A plot of land which you can use for growing agricultural products 9=Don't know
99=Refused to answer

B19. What are the sources of water used by your household?

1=Tap water
2=Stand-pipe/Water Kiosk
3=Borehole
4=Protected spring
5=Unprotected source

B19. What are the sources of water used by your household?
1=Tap water
2=Stand-pipe/Water Kiosk
3=Borehole
4=Protected spring
5=Unprotected source
6=Other (specify)
9=Don't know
99=Refused to answer
B20. How is excrete disposed of by your household?
1=Water closet inside house
2=Water closet outside house
3=Own pit latrine (in yard)
4=Communal pit latrine
5=No latrine
9=Don't know
99=Refused to answer
B21. What are the sources of electricity for your household?
1=Hydropower (umeme)
2=Solar power
3=Generator
4=No electricity
5=Others (Specify)
9=Don't know
99=Refused to answer
B22. Estimate your monthly household income (the combined income of all household members)
1=5,000-50,000 UG
2=50,001-100,000 UG
3=100,001-500,000 UG
4=500,001-1,000,000 UG
5=Above 1,000,000 UG
9=Don't know
99=Refused to answer

B23. **What are the main sources of household income?**

1=Farming

2=Manufacturing business

3=Trade

4=Salary or wages (government)

5=Salary or wages (private)

6=Pension, Transfer payment (from relatives and friends)

7=Soap/casual work

8=Others (specify)

9=Don't know

99=Refused to answer

B24. **In the past 12 months, how often, if ever, have you or someone from your household:**

	Never	Once or twice	Several times	Often	Always	Don't know	Refused to answer
a. Did not have enough food to eat?							
b. Did not have clean water?							
c. Did not have enough fuel to cook food?							
c. Did not have transportation?							
d. Did not have a cash income?							
f. Did not have electricity?							
e. Did not have essential clothes, shoes?							

B25. On average, how do you spend on the following items in the past 6 month?

	Below 10,000=1, 10,001-50,000=2, 50,001-100,000=3, 100,001-300,000=4, Above 300,000=5
Healthcare	
Education	
Food	
Household utilities (energy and water)	
Cleaning materials i.e. soap	
Entertainment	
Transport	
Other (specify)	

C. Demand for service, including lack of service - healthcare

C1. **In the past 12 months, have you or someone from your household, who needed treatment or maternity care, went to a healthcare facility**?
1=Yes
2=No
IF YES, GO TO C2; OTHERWISE, GO TO C5.

C2. **Have you or someone from your household used public healthcare services in the past 12 months?**
INTERVIEWER READS DEFINITION: Public healthcare services are provided by government owned facilities, not just hospitals and clinics.
1=Yes
2=No
9=Don't know
99=Refused to answer

C3. **Have you or someone from your household used private healthcare services in the past 12 months?**
INTERVIEWER READS DEFINITION: Private healthcare services are provided by facilities that are owned privately (by an individual, company, or organization), not just hospitals and clinics.
1=Yes
2=No
9=Don't know
99=Refused to answer

IF “YES” GO TO C4.

C4. What was the reason why you or someone from your household attended a private healthcare facility and not a public one when treatment or maternity care was needed? (multiple choice)

1=Better service than in private healthcare facilities
2=There is corruption in public healthcare facilities I want to avoid
3=Can’t afford paying bribes or providing gifts for services in public healthcare facilities 4=Long waiting time in public healthcare facilities
5=Healthcare workers are more committed in private healthcare facilities
6=Other (specify)
9=Don’t know
99= Refused to answer

IF THE ANSWER IS “NO” TO C2 AND C3, GO TO C5.

C5. **What was the reason why you or someone from your household did not attend a healthcare facility when treatment or maternity care was needed? (multiple choice)**

1=Healthcare facility is located too far away
2=Too expensive to pay official fees
3=Too expensive to pay bribes and/or extra fees
4=There is corruption in healthcare facilities I want to avoid
5=Don’t trust healthcare professionals
6=COVID-19
7=Other (specify)
9=Don’t know
99= Refused to answer

IF THE ANSWERS TO C1 AND C2 IS “NO” GO TO MODULE F; OTHERWISE, GO TO MODULE D.

D. Prevalence and direct costs of corruption for users in service delivery – healthcare

D1. What is the type of the nearest healthcare facility?

INTERVIEWER READS DEFINITIONS IF NEEDED:

Private clinic - is a clinic that provides services and it is not government owned.
Village health team - volunteers selected by their communities to provide health information and help community members to find available health services.
Health Center II - parish level facilities providing limited care (for example, testing) with no place for people to sleep.
Health Center III - sub-country level facilities, also providing maternity services. Regional Referral Hospital - region level facilities providing various inpatient services. General Hospital - district level facilities providing various inpatient services.
National Referral Hospital - national level providing full range of services.

1=Medicine sellers
2=Private clinic
3=Village health team
4=Health Center II
5=Health Center III
6=Regional Referral Hospital
7=General Hospital
8=National Referral Hospital
9=Don’t know
99=Refused to answer

D2. **How far is the nearest public healthcare facility from your household?**

1=Less than 500m
2=0.5 - 1km
3=1km - 2km
4=2km - 3km
5=Over 3km
9=Don’t know
99=Refused to answer

D3. **Please indicate which healthcare facilities and how many times have you or someone from your household visited in the past 6 months?**

	Never	Once or twice	Three to five times	More than five times	Don't know	Refused to answer
Medicine sellers						
Village health team						
Health Center II						
Health Center III						
Health Center IV						
Regional Referral Hospital						
General Hospital						
National Referral Hospital						
Medicine sellers						

IF RESPONDENT DOES NOT KNOW WHICH FACILITY SPECIFICALLY, GO TO D3.1

D3.1. **How many times have you or someone from your household visited government healthcare facilities in the past 6 months?**

1=Never

2=Once or twice

3=Three to ive times

4=More than ive times

9=Don't know

99=Refused to answer

IF THE ANSWER TO D3 OR D3.1 IS 1, 9 OR 99, GO TO SECTION F; OTHERWISE GO TO THE NEXT QUESTION.

D4. I**n the past 6 months, were you or someone from your household asked to pay a bribe, give a gift, pay extra money (but not an official fee) or do a favour for a healthcare worker?**

IF NO, GO TO D14; OTHERWISE, GO TO THE NEXT QUESTION

1=Yes

2=No

9=Don't know

99=Refused to answer

D5. **Please indicate in which healthcare facilities you or someone from your household were asked to to pay a bribe, give a gift, pay extra money (but not an official fee) or do a favour for a healthcare worker? (multiple choice)**

1=Medicine sellers
2=Village health team
3=Health Center II
4=Health Center III
5=Health Center IV
6=Regional Referral Hospital
7=General Hospital
8=National Referral Hospital
9=Don't know
99=Refused to answer

D6. **Please, indicate how many times and what the value was of the bribes, gifts, extra payments or favours given to each healthcare facility.**

	NUMBER OF TIMES (INTERVIEWER RECORDS NUMERIC RESPONSE)	VALUE, UGX
Medicine sellers		
Village health team		
Health Center II		
Health Center III		
Health Center IV		
Regional Referral Hospital		
General Hospital		
National Referral Hospital		

D7**. Recalling the most recent time you or someone from your household had to pay a bribe, make an extra payment, give a gift or do a favour for a healthcare worker in a public healthcare facility, what type of healthcare facility were you at?**

1=Medicine sellers
2=Village health team
3=Health Center II
4=Health Center III
5=Health Center IV
6=Regional Referral Hospital
7=General Hospital
8=National Referral Hospital
9=Don't know
99=Refused to answer

D7.1 **The last time you or someone from your household had to pay a bribe, make an extra payment, give a gift or do a favour for a healthcare worker in a public healthcare facility (the most recent event), what did you/someone from your household give?**
1=Food and drink
2=Valuables (gold, jewellery, phones, etc.) or other goods
3=Some money (please specify amount in national currency)
4=Exchange with another service or favour
9=Don't know
99=Refused to answer
IF ANSWER IS EXCHANGE WITH ANOTHER SERVICE OR FAVOUR (4) GO TO THE NEXT QUESTION, OTHERWISE GO TO D9
D8**. If you or someone from your household had to do a favour in order to obtain health services the last time, what type of favour was it?**
INTERVIEWER ASK THIS QUESTION AS AN OPEN-ENDED QUESTION AND CODES THE ANSWER.
1=Running an errand
2=Provision of labour or services
3=Sexual favour
4=Other (specify)
9=Don't know
99=Refused to answer
D9. **Recalling the last time you or someone from your household had to pay a bribe, make an extra payment, give a gift or do a favour for a healthcare worker in a public healthcare facility, what was the purpose of doing so?** (multiple choice)
1=Get good quality care
2=Get treatment from the well-known specialist
3=Speed up procedure
4=Make finalization of procedure possible (which would otherwise, not be possible)
5=Avoid payment of fine
6=Receive information on the process (where to go, whom to approach, etc.)
7=It was a sign of appreciation for the service provided
8=No specific purpose (it is better to maintain good relationships)
9=Don't know
99= Refused to answer

D10. **The last time you or someone from your household had to pay a bribe, make an extra payment, give a gift, or do a favour for a healthcare worker in a public healthcare facility, when exactly did you give the gift/money/favour?**
1=Before the service was delivered
2=After the service was delivered
3=At the same time that the service was delivered
4=Partly before and partly after the service was delivered
9=Don't know
99=Refused to answer

D11. **Have you or someone from your household had to borrow money in order to give a bribe, a gift, or to make an extra payment (but not an official fee) for health related services?**
1=Yes
2=No
9=Don't know
99=Refused to answer

D12. **Has your household had to cut other expenses in order to give a bribe, a gift, or to make an extra payment (but not an official fee) for health related services?**
1=Yes
2=No
9=Don't know
99=Refused to answer

D13. **In your opinion, was the received health related service worth the payment?**
1=Yes
2=No
9=Don't know
99=Refused to answer

D14. **In the past 6 months, have you or someone from your household ever been unable or refused to pay a bribe, give a gift, pay extra money (but not an official fee) or do a favour for a healthcare worker?**
1=Yes
2=No
9=Don't know
99=Refused to answer

IF YES, GO TO THE NEXT QUESTION; OTHERWISE, GO TO D16.

D15. **If yes, have you or someone from your household received a treatment without being able/refusing to pay a bribe, give a gift, pay extra money (but not an official fee) or do a favour for a healthcare worker?**
1=Yes
2=No
9=Don't know
99=Refused to answer

D16. To what extent do you agree or disagree with the following statements:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Don't know	Refused to answer
Most people in Uganda expect to pay something extra when they see the doctor.							
To receive good quality healthcare from a public facility in Uganda, you must pay a bribe or extra money, give a gift or do a favour.							
If you do not pay a bribe or extra money, give a gift or do a favour, you will likely have to wait longer in a healthcare facility.							
It is acceptable for doctors to receive informal payments given their low pay.							
Most people in Uganda expect to pay something extra when they see the doctor.							
To receive good quality healthcare from a public facility in Uganda, you must pay a bribe or extra money, give a gift or do a favour.							
If you do not pay a bribe or extra money, give a gift or do a favour, you will likely have to wait longer in a healthcare facility.							
It is acceptable for doctors to receive informal payments given their low pay.							
Most people in Uganda expect to pay something extra when they see the doctor.							

E. Indirect costs of corruption for users in healthcare

E1. Recall the last time you or someone from your household visited a public healthcare facility. How easy or difficult was it to receive a consultation with a healthcare worker?

1=Very difficult

2=Somewhat difficult

3=Neither difficult nor easy

4=Somewhat easy

5=Very easy

9=Don't know

99=Refused to answer

E2. **Recall the last time you or someone from your household visited a healthcare facility. How easy or difficult was it to receive medicine?**

1=Very difficult
2=somewhat difficult
3=Neither difficult nor easy
4=Somewhat easy
5=Very easy
9=Don't know
99=Refused to answer

E3. **Recall the last time you or someone from your household had to wait to receive the medical care once the facility was open. How long did it take?**

Less than 30 minutes
30 minutes - 2 hours
2 hours - 5 hours
More than 5 hours
9= Don't know
99=Refused to answer

E4. **In the past 6 months, have you or someone from your household been in the situation when you or someone from your household had to wait and still did not receive treatment?**

1=Yes
2=No
9=Don't know
99=Refused to answer

E5. **In the past 6 months, have you experienced a situation when you or your family member did not get treatment because a doctor or a nurse in a public healthcare facility was absent?**

1=Yes
2=No
9=Don't know
99=Refused to answer

IF YES, GO TO NEXT QUESTION; IF NO, GO TO E7

E6. **In the past 6 months, how often you or your family member did not get treatment because a doctor or a nurse in a public healthcare facility was absent?**

1=Once or twice
2=Several times
3=Often
4=Always
9=Don't know
99=Refused to answer

E7. **In your opinion, in the past 6 months, has your health or the health of someone from your household deteriorated due to low quality treatment in a public healthcare facility?**

1=Yes
2=No
9=Don't know
99=Refused to answer

Annex D. List of Sample Enumeration Areas

District Name	County Name	Subcounty Name	Parish Name	EA Name	Population
KAMPALA	KCCA	KAWEMPE DIVISION	KYEBANDO	NSOOBA 'E'	87
KAMPALA	KCCA	MAKINDYE DIVISION	KANSANGA	SSEBALALA 'B'	396
KIBOGA	KIBOGA	KIBOGA TOWN COUNCIL	BAMUSUUTA	LUFULA 'D'	121
WAKISO	BUSIRO	KATABI TOWN COUNCIL	KITALA	KITALA 'C'	489
WAKISO	KIRA MUNICIPALITY	KIRA DIVISION	KIRA	NAJJERA BUSIBANTE 'G'	181
WAKISO	NANSANA MUNICIPALITY	GOMBE DIVISION	MATUGGA	KATALEMWA 'E'	130
BUIKWE	NJERU MUNICIPALITY	NJERU DIVISION	NJERU WEST	NAMWEZI 'H'	137
LUWERO	KATIKAMU	BUTUNTUMULA	KAKABALA	NALONGO 'C'	75
MUBENDE	BUWEKULA	MADUDU	KAKENZI	KYEDIKYO	107
NAKASONGOLA	BURULI	NAKITOMA	BUJJABE	KIKOOBA	143
KAYUNGA	NTENJERU	BUSAANA	NAMUKUMA	KYAYAAYE 'B'	125
MITYANA	MITYANA	KIKANDWA	KIKUNYU	NSANGABWAMI	147
GOMBA	GOMBA	KYEGONZA	NAKIJJU	KASASA KIBOMBO	154
KYOTERA	KYOTERA	KASAALI	GAYAZA	GAYAZA A 'A'	88
BUSIA	BUSIA MUNICIPALITY	WESTERN DIVISION	NORTH A	SOLO A 'I'	119
JINJA	BUTEMBE	KAKIRA TOWN COUNCIL	WAIRAKA	WAIRAKA A 'C'	138
KAMULI	KAMULI MUNICIPALITY	SOUTHERN DIVISION	NANKULYAKU	KULINGO 'D'	70
MBALE	MBALE MUNICIPALITY	WANALE DIVISION	BOMA	NAKHUPA	93
KABERAMAIDO	KALAKI	OTUBOI	OPILITOK	KAMURIYE	87
KALIRO	BULAMOGI	KALIRO TOWN COUNCIL	BUKUMANKOOLA	BUGOMA	136
NGORA	NGORA	NGORA TOWN COUNCIL	SOUTHERN	TOWNSHIP A A	121
IGANGA	KIGULU	BULAMOGI	IWAWU	NAWANKOFU 'A'	90
KATAKWI	USUK	KATAKWI	ALELES	LALEI A	113
SOROTI	SOROTI	GWERI	AWOJA	AWOJA 'A'	93
MAYUGE	BUNYA	WAIRASA	WANDAGO	WANDAGO B 'A'	158
BUTALEJA	BUNYOLE	BUSABI	BUSABI	MALONGO 'A'	93
BUYENDE	BUDIOPE	KIDERA	BUYANJA	KASATO	139
BUTEBO	BUTEBO	BUTEBO	KASYEBAI	KATAKWI	104
APAC	APAC MUNICIPALITY	ATIK DIVISION	INDUSTRIAL	MARKET STREET 'B'	71
GULU	GULU MUNICIPALITY	PECE DIVISION	TEGWANA	AYWEE 'B'	114
LIRA	ERUTE	AGWENG	ACELELA	ANYOMENE	44
NEBBI	NEBBI MUNICIPALITY	ABINDU DIVISION	NEBBI HILL	ARUMUKENG 'B'	162
DOKOLO	DOKOLO	DOKOLO TC	EASTERN	ANYOMOLOI 'B'	66
ALEBTONG	MOROTO	ALEBTONG TOWN COUNCIL	NAKABELA	ALEBTONG WEST 'B'	55
OMORO	OMORO	OMORO TOWN COUNCIL	TE-GOT	ARWOTOMIA 'B'	122
ARUA	AYIVU	OLUKO	ANIPI	VUDRIKALI	65
KOTIDO	JIE	KACHERI	LOSAKUCHA	KOGILIGILI 'C'	62
NAKAPIRIPIRIT	CHEKWII	MORUITA	MORUITA	SUKUDIK	114
AMURU	KILAK	PABO	KAL	KAL CENTRE 'D'	293

OYAM	OYAM	LORO	ACANPII	DAGOADEK	50
KOLE	KOLE	OKWERODOT	ADELLOGO	BARPUNU	80
OMORO	OMORO	LALOGI	JAKA	LAMINONAMI 'B'	114
HOIMA	HOIMA MUNICIPALITY	BUSIISI DIVISION	KIHUKYA	KAITIRA 'A'	131
KASESE	BUSONGORA	HIMA TOWN COUNCIL	KARUNGIBATE	KINYAMWENGE	146
MBARARA	MBARARA MUNICIPALITY	KAKOBA DIVISION	KAKOBA	KISENYI A 'C'	179
NTUNGAMO	NTUNGAMO MUNICIPALITY	WESTERN DIVISION	KAHUNGA	NYABUBARE 'A'	213
IBANDA	IBANDA	IGORORA TOWN COUNCIL	IGORORA	NTUNGAMO I	69
KIRYANDONGO	KIBANDA	KIGUMBA TOWN COUNCIL	WARD C	KIHURA II 'C'	145
KAGADI	BUYAGA	MUHORRO TOWN COUNCIL	NYAMITI	KIBANGA	67
KABALE	NDORWA	BUHARA	BUHARA	KYASE A 'A'	71
KIBAALE	BUYANJA	NYAMARWA	KYAKATWANGA	KAHORO 'A'	126
NTUNGAMO	RUHAAMA	RUHAAMA	RWENGOMA	NYAKAHITA	77
KANUNGU	KINKIIZI	RUGYEYO	KATUNGU	BURORA	91
KIRUHURA	KAZO	BURUNGA	BURUNGA	KAWIRI	93
NTOROKO	NTOROKO	KANARA	KAMUGA	KAMUGA 'A'	92
RUBANDA	RUBANDA	RUHIJA	KITOJO	NKUKURU	86

Annex E. Logistic regression analysis (for figures 4 and 5)

Table E1. Full logistic regression results of associations with requests for bribes (figure 4)

	Coef.	P-value
Age	-0.15	0.012
Female	-0.14	0.334
Household size	0.14	0.185
Poverty	0.44	0.000
Pregnancy	0.50	0.024
Malaria	0.25	0.097
Flu or cold	-0.07	0.651
Long term condition	0.61	0.002
Urban	0.10	0.493
Western	0.51	0.012
Central	-0.09	0.692
Eastern	-0.88	0.000
Constant	-3.18	0.000
LR Chi2	83.80	
Prob Chi2	0.000	
Pseudo R2	0.06	
N	1,621	

Note on variable measurement: Age:1) 18-24, 2) 25-34, 3) 35-44, 4) 45-54, 5) 55+; Female: 1) female; Household size: 1) less than 2, 2) 2-4, 3) 5-10, 4) >10; Poverty: mean response to questions about frequency of going without food to eat, clean water, cash income, electricity, and essential clothing, in the last year, with possible responses: 1) never, 2) once or twice, 3) 3 to 5 times, 4) >5 times; Pregnancy, Malaria, Flu or cold and Long term condition : 1) past year someone from household experienced condition/illness; Urban: 1) Urbanite, 0) not; Regions: 1) resident of region with baseline as the North.

Annex F. Comparison of household survey estimates with the estimates from other relevant surveys.

Table F1. Comparison of household survey estimates with the estimates from East Africa Bribery Index, Afrobarometer, and National Integrity Survey IV.

timate	Household survey (2021)	East Africa Bribery Index (2017)	Afrobarometer (2018)	National Integrity Survey IV (2019)
Share of respondents having interacted with the sector	80%	74%	Not available	Not available
Prevalence of bribery	20%	19%	42%	29.5%
Average size of the bribe	20,000 UGX	29,350 UGX	Not available	Not available

References

Bakeera, S.K., Wamala, S.P., Galea, S. et al. Community perceptions and factors influencing utilization of health services in Uganda. Int J Equity Health 8, 25 (2009). https://doi.org/10.1186/1475-9276-8-25

Bardhan, P. and Mookherjee, D. (2006), Decentralisation and Accountability in Infrastructure Delivery in Developing Countries. The Economic Journal, 116: 101-127. https://doi.org/10.1111/j.1468-0297.2006.01049.x

Björkman, Martina, and Jakob Svensson. "Power to the People: Evidence from a Randomized Field Experiment on Community-Based Monitoring in Uganda." The Quarterly Journal of Economics 124, no. 2 (2009): 735-69. Accessed March 10, 2021. http://www.jstor.org/stable/40506242.

Charoensukmongkol, Peerayuth, and Murad Moqbel. "Does Investment in ICT Curb or Create More Corruption? A Cross-Country Analysis." Public Organization Review 14, no. 1 (2012): 51–63. https://doi.org/10.1007/s11115-012-0205-8.

Fazekas, Mihaly & Kocsis, Gabor (2020). Uncovering High-Level Corruption: Cross-National Objective Corruption Risk Indicators Using Public Procurement Data. British Journal of Political Science, 50(1), 155-164. doi:10.1017/S0007123417000461

Gaal, Peter, Tamas Evetovits, and Martin McKee. "Informal Payment for Health Care: Evidence from Hungary." Health Policy 77, no. 1 (2006): 86–102. https://doi.org/10.1016/j.healthpol.2005.07.024.

Gates, Scott & John Brehm (1997). Working, Shirking and Sabotage: Bureaucratic Response to a Democratic Public. Ann Arbor, MI: University of Michigan Press.

Hamill, H., David-Barrett, E., Mwanga, J. R., Mshana, G., & Hampshire, K. (2021). Monitoring, reporting and regulating medicine quality: tensions between theory and practice in Tanzania. BMJ Global Health, 6(Suppl 3), e003043

Hanf, Matthieu & Van-Melle, Astrid & Fraisse, Florence & Roger, Amaury & Carme, Bernard & Nacher, Mathieu. (2011). Corruption Kills: Estimating the Global Impact of Corruption on Children Deaths. PloS one. 6. e26990. 10.1371/journal.pone.0026990.

Kankeu HT, Ventelou B. Socioeconomic inequalities in informal payments for health care: An assessment of the 'Robin Hood' hypothesis in 33 African countries. Soc Sci Med. 2016 Feb;151:173-86. doi: 10.1016/j.socscimed.2016.01.015. Epub 2016 Jan 13.

Klitgaard, Robert. Controlling Corruption. Berkeley: University of California Press, 1988.

Kwesiga, B., Ataguba, J.E., Abewe, C. et al. Who pays for and who benefits from health care services in Uganda?. BMC Health Serv Res 15, 44 (2015). https://doi.org/10.1186/s12913-015-0683-9

Lutwama, G.W., Roos, J.H. & Dolamo, B.L. Assessing the implementation of performance

management of health care workers in Uganda. BMC Health Serv Res 13, 355 (2013). https://doi.org/10.1186/1472-6963-13-355

Marquette, H. & Peiffer, C. (2021). Corruption Functionality Framework. Global Integrity Anti-Corruption Evidence Research Programme: Working Paper 6. Available at: https://ace.globalintegrity.org/wp-content/uploads/2021/01/GI-ACE_Research-Paper-Corruption-Framework-1.pdf

Mungiu, Alina. "Corruption: Diagnosis and Treatment." Journal of Democracy 17, no. 3 (2006): 86–99. https://doi.org/10.1353/jod.2006.0050.

Nyamweya, N. , Yekka, P. , Mubutu, R. , Kasozi, K. and Muhindo, J. (2017) Staff Absenteeism in Public Health Facilities of Uganda: A Study in Bushenyi District on Contributing Factors. Open Journal of Nursing, 7, 1115-1130. doi: 10.4236/ojn.2017.710081.

Peiffer, C. Armytage, R., Marquette, H., & Gumisiriza (2020) "Uganda's Health Sector as a 'Hidden' Positive Outlier in Bribery Reduction" Development Policy Review. DOI: https://doi.org/10.1111/dpr.12533

Persson, Anna, Bo Rothstein, and Jan Teorell. "Why Anticorruption Reforms Fail-Systemic Corruption as a Collective Action Problem." Governance 26, no. 3 (2012): 449–71. https://doi.org/10.1111/j.1468-0491.2012.01604.x.

Rose-Ackerman, S. 1978. Corruption A Study in Political Economy. New York: Academic Press.

Rose-Ackerman, S. 1999. Corruption and Government Causes Consequences and Reform. Cambridge: Cambridge University Press.

Savedoff, William D. and Karen Hussman. 2006. "Why Are Health Systems Prone to Corruption?" Chapter 1 in Global Corruption Report 2006: Corruption and Health. Pluto Press and Transparency International, London and Ann Arbor, MI.

Tweheyo R, Daker-White G, Reed C, et al 'Nobody is after you; it is your initiative to start work': a qualitative study of health workforce absenteeism in rural Uganda BMJ Global Health 2017.

Vian, Taryn. (2008). Review of Corruption in the Health Sector: Theory, methods and interventions. Health policy and planning. 23. 83-94. 10.1093/heapol/czm048.

Zhang, H., Fink, G., & Cohen, J. (2021). The impact of health worker absenteeism on patient health care seeking behavior, testing and treatment: A longitudinal analysis in Uganda. PloS one, 16(8).

Supported by