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Making Anti-Corruption Real

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Exploring the nature, enabling factors and solutions to corruption in the procurement of pharmaceuticals in Nigeria tertiary health institutions: a qualitative study

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1. Abstract

Background: Pharmaceuticals account for a large share of health budgets, second only to salaries of the workforce in most countries. Coupled with the complexity of managing multiple product lines from different suppliers, frequently with potential for substitution, this creates huge opportunities for corruption, especially in countries where governance systems are weak. We have sought to understand the situation in Nigeria, a country known to face challenges in this area, and identify underlying factors and possible solutions.

Method: We conducted 45 qualitative interviews in two tertiary health institutions owned by the Federal Government and a State Government, respectively. Respondents included members of facility procurement committees (pharmacists, medical doctors, accountants and procurement officers) and pharmaceutical sales representatives registered with the facilities. Data were analysed thematically, drawing on a model of procurement designed by Transparency International.

Findings: Many respondents agreed that the procurement system in both hospitals was inefficient and corrupt, with everyone connected to the hospitals bearing the consequences, which included alarming economic, social and health impacts on patients. We confirmed the existence of various corrupt practices, including bribery and kickbacks, favouritism, nepotism and selective bidding. Although several national procurement guidelines exist in literature, procurement actors are rarely guided by them, hence the prevalence of discretionary decisions. Other drivers that encouraged corrupt practices include weak monitoring, poor pay, political influence, government policies, social and kinship influences, rivalry between doctors and pharmacists and pressure on pharmaceutical representatives to meet sales targets, among other systemic and structural inefficiencies. Proposals for action were largely without supporting evidence, but we found some potentially successful interventions.

Conclusion: Pharmaceutical procurement in these tertiary health institutions was widely considered to suffer from corruption, with dire consequences for the country's health systems. However, an effective response will require changes at all levels of Nigerian society.

Keywords: procurement, pharma, pharmaceuticals, pharma procurement, corruption, accountability

2. Introduction

A reliable supply of affordable and appropriate pharmaceuticals is essential if we are to achieve Universal Health Coverage; pharmaceutical expenditure typically contributes the second largest share of health budgets after salaries (Cohen et al., 2007). However, procurement of pharmaceuticals is complex. There are many different product lines, with numerous providers and intermediaries. Sometimes they can be substituted but this is not always clear, given differences in dosage, formulations, indications and pharmacokinetics. Consequently, there is always room for discretion about what to procure and, in a context where the sums of money are large and governance is weak, this creates conditions that favour corruption. This has many consequences, including overstocking of medicines that then expire, recurrent stock-outs of essential drugs, and waste of scarce funds on expensive branded drugs rather than generics (Reich, 2000). These problems are widespread in Nigeria, where there is broad agreement that the current legal and regulatory systems are not working, with a thorough overhaul of the public procurement system needed (Jibrin et al., 2014). The situation is especially concerning in tertiary (teaching) hospitals in Nigeria, with frequent reports of inefficiencies and untoward practices (Chuku et al., 2016). This is despite the existence of laws on procurement of goods and services, such as the Public Procurement Act, intended to eliminate inefficiencies and corrupt practices by federal Ministries, Departments and Agencies, while some state governments have also adopted the law for their institutions.

Nigeria lacks a national pharmaceutical procurement guideline for health facilities and relies on a general procurement policy for all goods and services in the country. However, the National Drug Policy (NDP), which was first introduced in 1990, revised in 2003 and published in 2005, could suffice (Federal Ministry of Health, 2005). The policy seeks to advance good procurement practices, recognizes irregular practices in pharmaceutical procurement and acknowledges as important the Essential Medicines List (EML) and National Drug Formulary (NDF). The NDP noted, among other elements of good procurement practices, to include using the EML in procurement, procuring and prescribing medicines using International Non-Proprietary Names or generic names, efficient use of the Drug Revolving Fund (DRF), purchasing drugs in bulk to keep prices low, and the coordinating roles of qualified pharmacists in spearheading pharmaceutical procurement.

The intended operation of the NDP as per pharmaceutical procurement appears to be far from reality, with existing practices shrouded in mystery, typically differing in each tertiary hospital in ways that reflect the whims and caprices of hospital managers. While the NDP seems to be a neglected policy tool – as it was last revised in 2003 – the EML, which is keenly associated with decent procurement practices, has been revised seven times – its seventh edition is presently in the public domain (Federal Ministry of Health, 2020). The EML is designed and revised by the National Drug Formulary/Essential Drug List (NDF/EDL) Review Committee, which was established by Decree 43 of 1989 (currently Act CAP 252 LFN 2004) as a statutory body under the Federal Ministry of Health. Members of the NDF/EDL Review

Committee are primarily drawn from the fields of medicine, pharmacy and law. Essential medicines are written in generics, which is the recommended standard for procurement and prescription. Notwithstanding the efforts and commitments to good procurement practices as intended by the EML, studies suggest that it is disregarded, with evidence suggesting the scarcity of essential medicines in health facilities, and that procurement and prescription is mostly done using branded names (Chuku et al., 2016; Garuba et al., 2009; Onwujekwe et al., 2020).

The cost of corruption in pharmaceutical procurement is indeed grave, creating financial hardships for patients when they pay more for products, use substandard products and waste financial resources in the health sector (Kamorudeen and Bidemi, 2012; Maduke, 2013). Broadly, findings from the U4 Anti-Corruption Resource reveal that US$500 billion of public health spending is lost to corruption each year, with health sectors of developing countries most affected (Hussmann, 2020). Currently, there are no national or global datasets that present aggregated statistics on pharmaceutical procurement corruption. However, Transparency International (TI) has collected some evidence, as captured in Amin (2017). Cases of paying bribes to secure public contracts, poorer value for public health spending, and price differences in pharmaceuticals when compared with the worldwide reference price were described as common in Nigeria in TI's report on the need for open contracting.

The above situation is complicated by the opacity of the procurement system, with multiple actors playing crucial roles at different points, each with their own utility-maximising objectives that may diverge from the goal of maximising societal welfare and achieving Universal Health Coverage. These actors include procurement officers, pharmacists in the procurement unit, medical doctors, storekeepers, clerical officers, accountants, auditors, directors, sales representatives and managerial staff in ministries of health and in individual teaching hospitals. An understanding of this complex environment must also consider the actors whose goal is income maximisation. These actors include sales representatives and the pharmaceutical companies that employ them, and rent-seeking public officials. They, understandably, are constantly looking for opportunities to make extra cash or to achieve advantages over competitors.

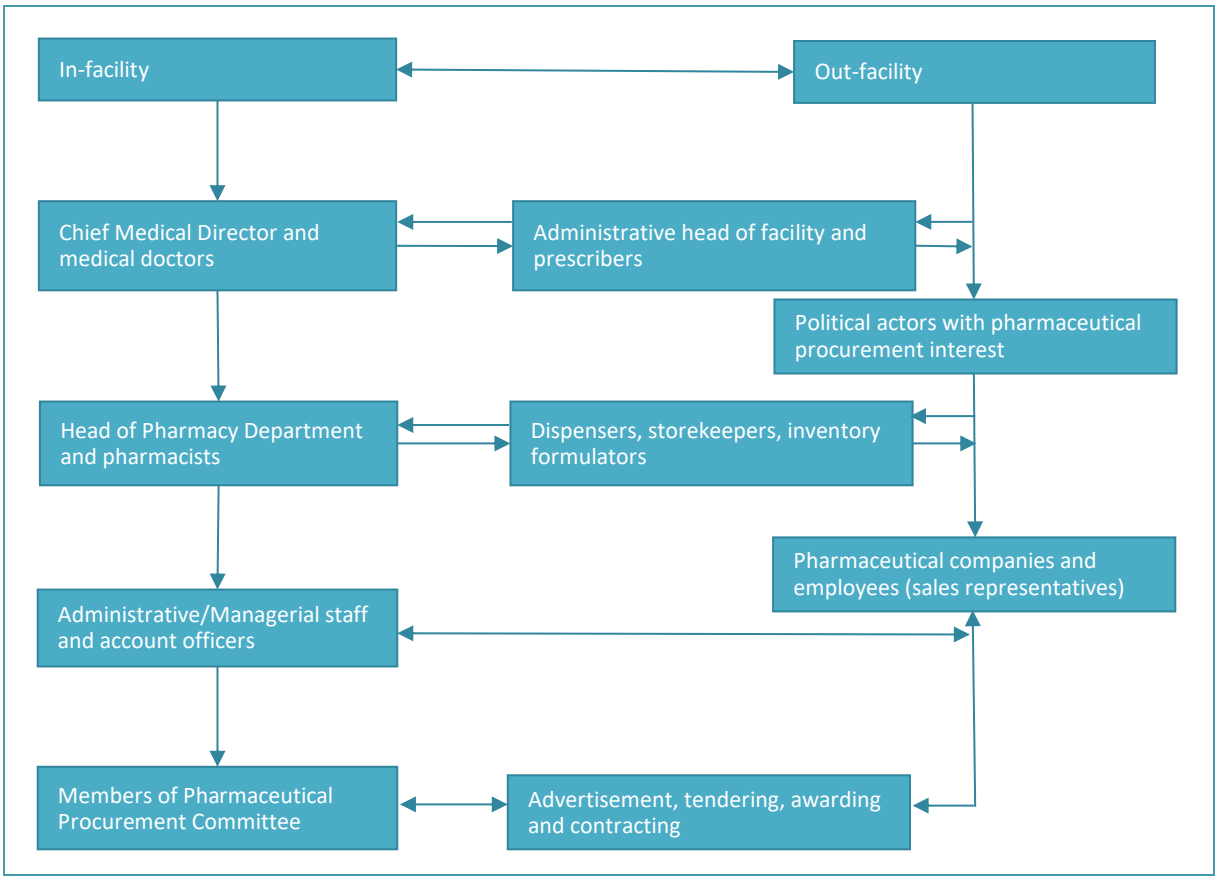
This takes us to the role of corporate influence over physicians' prescription patterns (Lexchin et al., 2018), a key element of marketing by the pharmaceutical industry that often takes the form of educational events and inducements. It can be especially effective where doctors are poorly paid and rely heavily on gifts (both monetary and material) from the pharmaceutical industry to supplement their livelihood. Those doctors may then seek to influence those involved in procurement to purchase the drugs in question (Cohen et al., 2007).

Inefficient systems are a major driver of pharmaceutical procurement corruption. Systems that thrive on analogue procedures, information asymmetry, incompetent staff and power asymmetries that allow certain people to act without oversight, breed corruption and even constrain anticorruption efforts (Bigdeli et al., 2013; Chuku et al., 2016; Ekeigwe, 2019). However, there is a gap in the literature regarding the manifestations of these inefficiencies

across the procurement chain. Interestingly, studies such as Onwujekwe et al. (2020) and Seidman and Atun (2017) have recommended in-depth study on these phenomena and contexts.

Overall, the constant overlap in functions, interests and activities of the different actors influences the procurement process and highlights the susceptibility of these relationships to corrupt practices. Procurement officers, prescribers, dispensers, storekeepers and clerical, accounts and audit officers may be influenced with incentives to favour a certain product over another, regardless of whether they are available (Akokuwebe and Adekanbi, 2017). Figure 1 shows a network of these actors and the interactions among them.

Figure 1. Network of pharmaceutical procurement actors



The procurement unit of the Department of Pharmacy is the main locus for procurement of pharmaceuticals in government teaching hospitals in Nigeria. The unit is usually comprised of pharmacists, with external influences from suppliers of pharmaceutical products as well as the top management team of the hospitals, which provides oversight and approves payment throughout the entire procurement process (Osuafor et al., 2021). All these actors have perverse incentives to undermine the system through corrupt practices or other suboptimal behaviours. However, among the network of actors that are pivotal to procurement, those that are directly part of the hospital's procurement committee are considered the most corrupt (Amadi and Tsui, 2019; Amin, 2017; Onwujekwe et al., 2020). They approve the procurement list, call for tenders, open tenders and prepare the final payment schedules for the suppliers. This group of actors, usually comprised of pharmacists,

medical directors, administrative staff and accounting officers, can request and are offered kickbacks by the pharmaceutical companies and suppliers to influence the list and quantities of products to be supplied, the prices, or to strike off bidding procedures in favour of directly purchasing from them, among other covers (Onwujekwe et al., forthcoming).

Valid evidence-based insights on the nature and drivers of corruption within the procurement units of tertiary hospitals are needed to understand the enabling factors that lead to corruption in the procurement of pharmaceuticals in tertiary hospitals and to determine the chain connections of these factors and how they interact to exacerbate corruption in the procurement of pharmaceuticals. These insights are also needed to provide new knowledge on evidence-driven potential solutions to improve hospital pharmaceutical procurement practices and to eliminate corruption, where possible, in ways that are self-enforcing and therefore resilient and efficient. Our emphasis on self-enforcement draws from the Anticorruption Evidence Consortium (ACE) framework, which emphasises the horizontal model of anticorruption. The framework argues that rule violators can be monitored and cautioned by their peers who could share some level of power. However, the ACE approach notes that the interests of such peers should be identified and galvanised towards action.

This report provides new knowledge on opportunities that could be used by actors to improve the procurement process within the procurement units of tertiary hospitals in a way that would eliminate corruption and be efficient and resilient. Therefore, this report identifies the corrupt practices within the pharmaceutical procurement units of tertiary hospitals and explores different horizontal interventions that could eliminate corruption in the procurement of pharmaceuticals in such hospitals. Evidence gathered here can be applied to the pharmaceutical procurement of other healthcare levels in Nigeria.

Overarching research question: What are the natures, drivers and effects of corrupt practices within the pharmaceutical procurement unit in tertiary hospitals and what interventions are feasible to eliminate such procurement-related corruption in Nigeria?

The specific research questions that were addressed were:

1 How are the current systems of procurement of pharmaceuticals in tertiary hospitals designed and implemented by the pharmaceuticals procurement unit?

2 How is the procurement of pharmaceuticals guided by an EML and data generated from end users of drugs (patients) (i.e. what are the criteria for procurement)?

3 What are the expected and actual roles and responsibilities of different actors within the pharmaceutical unit of hospitals on procurement of pharmaceuticals?

4 Are there systems in place to monitor and ensure adherence to approved and ethical pharmaceutical procurement processes in the hospitals?

5 What interventions have been implemented to improve accountability and decrease corruption in the procurement of pharmaceuticals in the hospital?

6 What horizontal interventions could be used to address the issue of corrupt practices in procurement of pharmaceuticals in tertiary hospitals?

3. Methods

3.1. Study area/sites and population

The study was undertaken in two tertiary health institutions in Nigeria, one owned by the federal government and the other by the state government.

The hospitals were selected based on the intensity of healthcare activities that are carried out, size of operation, geographical location and the presence of a pharmacy department operating functional pharmaceutical procurement units. Their selection also enabled us to explore the research questions at both the federal and state levels. Both facilities operate the competitive bidding pharmaceutical procurement system. However, reports were that direct purchase and closed bidding systems (drugs to procure are advertised using brand names) were extensively used in both. Thus, both facilities had similar experiences in the procurement of pharmaceuticals, notwithstanding a few peculiar and subtle nuances, as well as differing approaches to address certain procurement concerns.

The study population included pharmacists, medical doctors and administrative, managerial and accounting staff who work in the hospitals, and sales representatives of pharmaceutical companies as the sole representatives of the private sector. Sales representatives are the linkages between the hospitals and suppliers of pharmaceuticals (the companies) and are responsible for making sure their products are patronised, which in extreme cases could be achieved by cheating the hospital's procurement system.

The federal-owned and run facility is one of Nigeria's oldest health facilities. It has a tender unit that oversees procurement. The facility has three outposts and over 500 inpatient beds. The state-run facility has 14 departments, including a pharmacy department. It has five clinical departments, including the pharmacy department.

3.2. Data collection

Qualitative data: A total of 45 in-depth interviews were conducted with actors involved in the procurement unit and process within the hospitals. The individuals were purposively selected. The different cadres were pharmacists in the procurement units, sales representatives or suppliers, medical doctors, storekeepers and accounts officers.

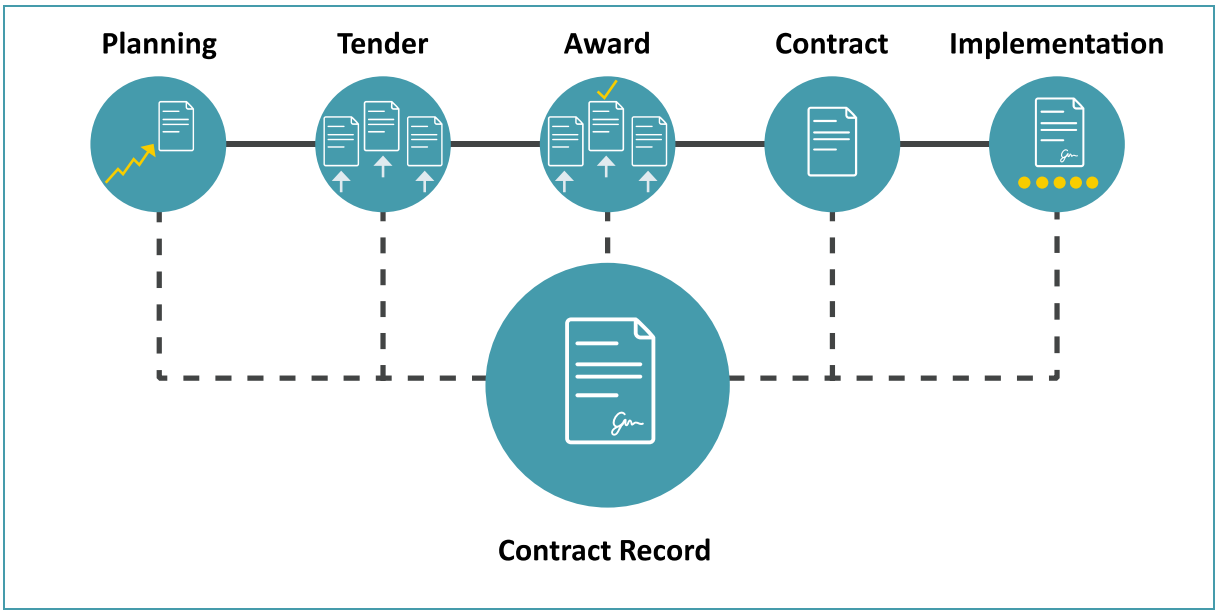
Participants were interviewed using a structured qualitative instrument to elicit information to answer the research questions. Interviews were booked with the participants in consideration of working hours and to discourage distraction during the process. Some of the specific issues that were explored included the levels of adherence to the essential list, procuring brand names, underlying reasons for practices and ways and means of improving drug procurement practices.

The participants were recruited through purposive and snowball sampling. Contact persons within the hospitals facilitated access to the managers who granted access for the conduct of the interviews. The contact persons and the managers suggested suitable interviewees within the procurement committee and equally availed themselves for interview. Those that we interviewed also helped in the recruitment of other participants. Usually, we explained the objective of the research and those who agreed to be interviewed were provided with consent forms, which they signed before the commencement of the interview. The interviews were conducted in participant's offices, while those of sales representatives were conducted at specified locations outside the institutions.

3.3. Analysis

Data was coded in themes that we generated by adopting the steps in pharma procurement, as designed by TI (see Figure 2). The essence of the design is to disaggregate the procurement chain so that each step can be carefully studied. The steps include planning, tender, award, contract and implementation. To add to these steps, we also generated codes by carefully studying the 45 transcripts and eliciting thematic/sub-thematic clusters in line with inductive method in qualitative research (Padgett, 2008). The thematic/sub-thematic clusters were used to pattern the arrangement of respondents' narratives in a Microsoft Excel spreadsheet. We critically looked at the arranged quotes under the designed thematic structure and decided which to add or delete. These processes informed the final themes presented in this report (see Table 1 for the schema of the generation of themes).

Figure 2. Steps in the procurement process (Open Contracting Partnership)



Source: Adapted from Open Contracting Partnership (https://www.open-contracting.org/data-standard/).

Table 1. Schema of generation of themes

First set of themes for analysis	Subthemes	Final adopted themes for write-up
Pharmaceutical procurement processes	Approved and conventional processes	No changes
	Unapproved and non-conventional processes	
Actors within the procurement setting	Within the hospital	Actors within and outside the pharma procurement chain of the hospital
	Outside the hospital	
Nature and types of accountability issues and corruption in pharma procurement	Planning	What corruption happens in pharmaceutical procurement?
	Tender	
	Award	
	Contract	
	Implementation	
	Others	
Opportunities for lack of accountability, inefficiency and corruption in the pharma procurement process	Planning	Why corruption happens in pharmaceutical procurement?
	Tender	
	Award	
	Contract	
	Implementation	
	Others	
Drivers of lack of accountability, inefficiency and corruption in pharma procurement	Systemic inefficiencies	No changes
	Personal and household needs and wants	
	Private interests	
	Political influences	
	Social and kinship ties	
	Professional rivalry	
	Brand versus generic	
	Pressure on and from sales representatives	
	Others	
Evaluation of accountability, transparency and efficiency of the procurement process	Complex and hard to follow	Complex, difficult and inefficient
	Simple and easy to follow	Simple and efficient
	Fast and efficient	
	Slow and inefficient	
Consequences of pharma procurement corruption and lack of accountability	Staff	Who is affected by pharmaceutical procurement corruption?
	Patients	
	Hospital in general	
	Pharmaceutical companies and sales representatives	
Solutions to corruption and lack of accountability or inefficiency in pharma procurement	Horizontal solutions (evolving from local actors)	No changes
	Vertical solutions (evolving from government actors)	
	Non-state actors and media	
	Evidence of successful interventions	
	Other suggested interventions	
Emerging issues		Not used

4. Findings

4.1. Sociodemographic information

A total of 45 participants (22 from the state-owned facility and 23 from the federal-owned facility) were interviewed. The participants included 22 pharmacists (from the store, ophthalmology, antiretroviral, dispensary units, etc.), and 6 medical doctors employed within the two facilities. Also, 10 sales representatives, 3 accountants, 1 procurement officer, 1 auditor and 2 Human Resource Managers were recruited and interviewed. The sales representatives had all worked for more than two years.

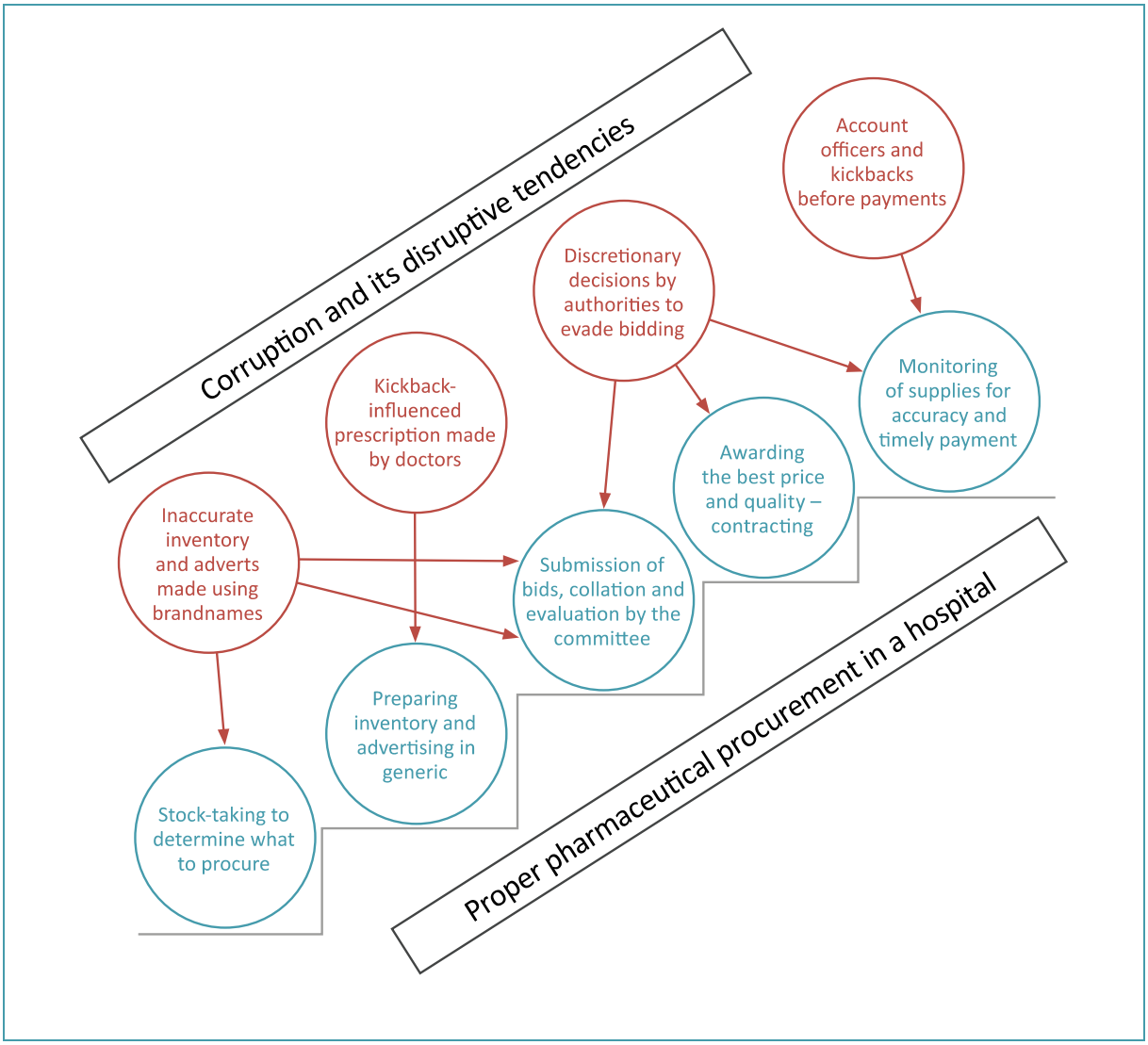
We recorded more males than females, probably because most of the pharmacists in tertiary hospitals are men. It is important to note that we did not set out to investigate gender disparity and cannot say with certainty why more males than females are within the workforce under study. However, we ensured that the key actors in the procurement chain, including top members of the hospital procurement committee, were approached and interviewed, and included both males and females.

4.2. Approved and conventional ways of pharma procurement

The standard process of procuring in the hospital is through the open bidding process, where all registered pharmaceutical companies are free to bid. They must register with the hospital at a fee of 12,000 Nigerian naira (N) for the federal-owned facility and N25,000 for the state-owned facility, subject to yearly renewal. This is required to ensure that all suppliers have approval from the necessary regulatory bodies.

The procurement process begins with storekeepers carrying out an audit of drugs that are out of stock or frequently needed and fast/slow lines to determine the quantity and urgency to procure. They submit the list to the procurement technical committee, which then collates the out-of-stock list and prepares a list of needed supplies. The committee schedules a meeting with the procurement team, which includes the Chief Medical Director (CMD), Chairperson Medical Advisory Committee (CMAC), Head of Department (HOD) of Pharmacy, heads of hospital units, top-ranking staff of the pharmacy unit, and accounts and administration sections of the hospitals. The team asks qualified pharmaceutical companies to bid and submit at a designated centre in the institution. They evaluate their quotations and the best realistic quotation, considering price and quality, is awarded the contract. The team issues the company with a Local Purchasing Order (LPO) to supply the pharmaceutical products, and the audit unit and storekeepers work closely to ensure that the goods stated are supplied at the quoted price. See Figure 3 for an example of proper pharmaceutical procurement and the potential disruption by corruption.

Figure 3. Standard pharmaceutical procurement practice and the disruption by corruption



In both facilities, respondents agree that there is a standard operating procedure (SOP) and processes followed by the officers to avoid bias. However, this SOP appears to be informal and not documented. No document specifically guiding the bidding process was sighted across all interviews, even though some of the participants indicated that it exists. At best, respondents have a mental picture of what they think or know is happening. A shift in the procurement process was commonly referred to by respondents. At the federal facility, this transition to a bidding process was reported to have happened in 2018, following the beginning of tenure for a new CMD. The transition occurred at almost the same at the state facility. Prior to this change, corrupt practices were reported to be common. Richer details of the procurement/bidding process were contained in the narratives of members of the procurement committee. Doctors and people outside the procurement committee had sketchy information about the procurement process, which made them doubtful of the process.

Conventionally, procurement is guided by the EML, which are drugs that must always be in the facility. The federal-operated facility had only started using the EML about a year before

the period of data collection, and they are gradually adjusting to the practice. Also, there are standard treatment guidelines for certain ailments and we learnt that these are gradually being enforced, even though there are occasions where patients are prescribed drugs not on the EML. This means that such patients receive prescriptions in branded names and are forced to buy specific brands, even when there could be cheaper and efficient alternatives. For illustration:

> *Even the essential medicine should be given to all of the doctors, including the chairman of the medical advisory committee so that they all have copies, because we still see some medicines that are not on the list right now appearing in prescriptions [Pharmacist, federal facility].*

There are other nuances in the bidding process that identify what happens in the event of a bid winner failing to supply. If a bidder who wins can no longer supply, the runner-up is contacted. Some units (e.g. the ophthalmology unit in the federal and state facilities) have devolved a semi-autonomous system. They report having their own inner committee that identify supplies that are needed and they also seem to have a specific supplier who supplies their needs. They consider this process better and more efficient and believe that it has reduced their chances of running out of stock, even though as it goes against the competitive bidding system that is recognised and approved as the best practice for procurement. Lastly, the antiretroviral (ARV) section in the state-run facility is the only pharmaceutical section that does not follow the hospital's procurement pattern. They get their drugs through United States Agency for International Development or from some non-governmental organisations (NGOs). However, they make requisitions for reordering before they are supplied.

4.3. Unapproved and non-conventional processes in pharma procurement

While participants agreed that the convention is competitive bidding, our findings show several inconsistencies. These inconsistencies make the procurement process unfair and uncompetitive. First, direct cash purchase or direct quotation is used to procure pharmaceuticals through emergency orders. This means that companies do not need to bid but are called specifically to supply based on terms reached with the HOD of Pharmacy in the hospitals. The hospital has some elite companies they call to supply them through direct quotation, and sales representatives try to plead or bribe their way through so their products can be listed on the direct quotation. If an advert is eventually made, the brands of these companies will be listed, which obviously means that they are the exclusive suppliers.

Another non-conventional means of procuring is when doctors procure without the involvement of the pharmacists. Also, there are situations that push the procurement officers into procuring products that are of poor quality and at high prices. Most of the respondents in the federal facility agree that situations like the recent pandemic encouraged pharmacists to bypass the process and procure based on need. For example:

> *The only situation where we could observe such a thing is that sometimes there could be emergency and a drug is not available in the hospital […] before going through the logistics of generating calls for bidding, bidding itself, involving the quality control section, it will be a long time […] so, we just go ahead to procure [Pharmacist, federal facility]*

One of the respondents further stated that there was a time when members of the committee will make recommendations on the drug needs of the hospital and the HOD of Pharmacy will ignore the recommendation and buy whatever they want.

> *[…] The last regime was something else but the present HOD has no personal interests. Sometimes they (the last regime) accepted drugs with low shelf-life and this was always a tussle between the HOD and I, because I was not comfortable with it. They could buy the drugs behind us, and sometimes the drugs expired on us [Doctor, federal facility]*

A pharmacist also said:

> *Also, there is what is called emergency order, where a facility procures drugs whether old or new drugs because of the need for those drugs. The goal of the procurement is to satisfy patients' drugs list at any point in time. So, if you are not achieving this, it means you are not getting it [Pharmacist, state facility].*

However, it seems that the unapproved process is followed to fulfil the goal of procurement, which is to satisfy the drug needs of patients. Equally, it illustrates the use of discretionary powers to avoid procuring rightfully.

Further, while some participants claim that bidding is competitive, which means that adverts after approval from the HOD Pharmacy and CMAC should be made in generic names, findings showed that brand names are often used, making the process restrictive.

4.4. Other actors within and outside the pharmaceutical procurement chain of the hospital

There are other actors who are not part of the committee but are key players within the procurement process. One of them is the storekeeper, who is valuable during the planning stage as they provide data on monthly consumption, among other necessary things. They also prepare a record of items to be procured. When goods are brought into the facility, the storekeepers receive them and check their expiry date before storage. Thus, the people in the budget and planning unit work hand-in-hand with the people in the store to ensure that goods declared out of stock are actually out of stock and not laying somewhere in the store.

On specific roles, the budgeting and planning department does the assessment, recommends the drug needs of the hospital and kickstarts the procurement process, the audit department ensures the prices quoted by the companies are the market prices, the quality control department makes recommendations on the quality of the drugs, the

accountant is responsible for payment after awards have been issued and supplies have been made, and the unit heads represent the end user as they interact with them constantly, while the HOD Pharmacy works closely with the CMD, pharmacists and the procurement committee.

Drug/sales representatives and the companies that they represent, as well as distributors, are the bidders who compete to secure supply contracts with the hospital. There was also a mention of government officials who come to supervise activities around drugs and drug supply. The National Agency for Food and Drug Administration and Control was also identified in the monitoring and supervision process, as they give approval that now serves as a quality control tool for the hospitals.

4.5. Nature and types of accountability issues and corruption in pharma procurement (What types of corruption occur?)

4.5.1. Planning (pre-tender)

The essence of bidding is to ensure that good quality pharmaceutical supplies are procured at the cheapest possible price. That way, efficacy and affordability of consumables will be protected. However, uncertainty within the hospitals means that certain pharmaceutical supplies may run out before the routine procurement time, which may necessitate an emergency procurement, and a need to by-pass the normal procurement/bidding process.

In the state facility, the practice was to procure from the last supplier at the last price. When this latter supplier cannot meet this requirement, the runner-up in the previous bid will be contacted to supply the needed consumable. While this strategy may have its merits, it is clearly not transparent because other pharmaceutical companies are not given an equal opportunity. At the federal facility, the HOD of Pharmacy is usually given an amount of money, known as ‘imprest’, to make emergency purchases without going through the formal procurement process. Procurement officers could arrange for any supplier to bring in the consumable at an agreed price. Thus, the prices of consumables could be inflated following connivance between the pharmacists or those in the procurement committee and the pharmaceutical companies. Consequentially, the efficacy of the consumables might not be checked. Besides, there is an unfair advantage given to well-established and well-known companies on the grounds of social ties, political connectedness or bribery, enabling them to supply directly without having to bid.

As hospitals have not completely transitioned to using the EML, the procurement process is prone to be influenced by prescriptions made by doctors (especially by doctors requesting that certain drugs must be procured) and the fact that hospitals can sometimes be specific with the brands they procure. Drug representatives, therefore, push to bring the attention of doctors to their brands. The goal of the drug representatives is to introduce their drug brands to the pharmacy unit and then increase pressure for the doctors to adopt and prescribe it. While some pressures were identified to be ethical – for example, convincing

the doctors (during organised seminars and personal interactions) on the superiority of their drugs – other means of influence that may be unethical were spotted. Doctors were reported to be influenced by drug representatives with gifts including food items, clothes and writing materials, as well as sponsorship for conference attendance. There were also reports of doctors being on the payroll of pharmaceutical companies. Doctors were also said to collude with drug representatives to generate demand for a particular drug/brand to be included on the procurement list:

What they do is to put pressure on the doctors to keep writing their brand of drugs. From there the pharmacists will say, I have been seeing this drug, and people have been going out to buy them. Let us include it. [Doctor, state facility]

Reference was also made to the previous design of procurement (pre-2018) in one of the facilities where the HOD of Pharmacy had sole discretion and assigned contracts to his preferred persons to supply drugs. These occurrences take place at the planning stage of procurement. Some participants gave examples:

...Because the pharmaceutical companies might have agents here, some are employed staff, who will go and inform them on how to submit their bids, and the prices to put so that they will be the winners. That is what we have and we put some checks. You can't win more than three because others should have something. Because they might be compensating them somehow from the back door and they will be projecting them. That is Nigeria for you [Doctor, state facility].

Of course, things like this happen because this is Nigeria. Although, institutions are trying to curb these things by setting up committee so it won't be a single person calling the shots. Things like this happen when there is monopoly, that's one person taking all the decisions and determines who supply the drug. That is why we have committees such as the Drug Revolving Fund (DRF) committee so that a particular department will not have an overriding say because a lot of lobbying takes place which can mean that the effectiveness of the drugs to be procured will not be considered [Pharmacist, state facility]

4.5.2. Tender

During the tendering stage, which entails receiving and analysing bids, findings from interviews show that although companies try to avoid the entire bidding process, especially when it is competitive, some that participate – including some elite companies – try to manoeuvre or accept to pay a certain percentage to win. Some of the companies are always confident of winning – and would always win, despite the intended competitiveness of the bidding process. There could also be the possibility of paying bribes to be included among the competitive bidders. Some companies attempt to find out what other companies are quoting try to influence the process using existing relationships or network with powerful persons within the procurement chain. As a sales representative mentioned:

> *When I got here, I tried to follow the procedures. But I was not making any sale. I decided to associate with my co-sales representatives, and got to know that*

following the rules does not make much sense. That is how I had to start meeting with people to help me to get my brands listed on the advert [Sales Representative, state facility]

Bidders were also reported to act fraudulently by sometimes making unrealistic quotations to enable them to win. When these bidders win, they begin to approach the institutions for renegotiation on the price of supplies. Also, they may deliberately supply brands that were not demanded or try to fake the packaging of the required brands, while the content is entirely different. Bidders were also reported to supply products with close expiry dates.

Officials who oversee the bidding process may alter the bidding outcomes to favour their preferred persons due to kinship or social relationship ties. Insiders may give privileged information to a supplier who they are interested in, telling them the last price the drug was awarded.

Our quality assurance is too poor. Most of the times we just take the drugs they supply without testing and validating active components before the supply or thoroughly checking them after supply. Some could be close to expiry or the content and packaging can differ which is loss for us. This is a Nigerian problem [Pharmacist, state facility]

My colleague who is a sales representative has her mother working here. She is always supplying. She is the one that told me to find my way and stop thinking the rules are working [Sales Representative, state facility]

4.5.3. Award

The influence of social ties on the award of contracts is pronounced. As the above quote shows, relatives and friends could be favoured over competent bidders. Moreover, efforts to validate the effectiveness of drugs were said to be weak, so standards were lacking. Sometimes, the elite companies lobby to win, and that is why they are always in business.

4.5.4. Contract

When the contract to supply has been issued to a pharmaceutical company, they are given an LPO to supply the stated the products at the quoted price. After supplying, officers may refuse to sign or delay the necessary paperwork, forcing the sales representatives to go from office to office and offer bribes to facilitate the process. This is a case of the hospital officers taking advantage of the pressure on sales representatives to facilitate payments to the companies they represent. At times, salaries and incentives for sales representatives are tied to how quickly their companies get paid.

Even when you supply, you still need to beg to get paid. That is where you offer 'kola' (bribes) to some people, especially at the accounts department to facilitate your payments [Sales Representative, state facility]

We also discovered that top persons within the procurement chain can sometimes strike a deal with the pharmaceutical companies to receive kickback after contracting them to supply certain quantities. One of the sales representatives recounted his experience with a top pharmacist in the procurement chain:

> *When I entered there, I told him he will get a certain amount for every carton that is sold. He gets the money from the management of my company. I don't need to meet him at his office. Sometimes, we meet in some private places [Sales Representative, federal facility]*

4.5.5. Implementation

As explained earlier, procurement times in at least one of the hospitals was irregular (i.e. it was not done monthly or quarterly). The committee that receives and analyses the bids do not sit often, which gives room for arbitral procurement that is usually expensive and increases the cost of consumables. From the account section, it was discovered that sales representatives who push to procure, also push to get paid. To quickly get paid, those in the accounts section of the hospital could demand some bribe. A sales rep recounted:

> *Also, people in the account department are not left out. They could demand for money from sales representatives, in order to process their company's payment faster [Sales Rep, state facility].*

4.5.6. Others

Drugs were issued without receipts such that it was not clear how much revenue was accruing to the hospital coffers. Some pharmacists were said to influence/manipulate drug prices, which account for increasing the costs of drugs in the hospital and so channel patients to buy from their privately owned drug shops just outside the hospital where they lure patients with better prices. Additionally, doctors and sales representatives collude to make some brands available in private pharmacies outside the hospital and prescribe brands that can be bought there. They may divert patients to these pharmacies. Some pharmacists were also reported to sell private drugs before the facility-owned drugs.

4.6. Reasons for lack of accountability, inefficiency and corruption in the pharma procurement process (Why does corruption happen?)

4.6.1. Planning

The International Reference Price[1] is expected to guide procurement of consumables by providing a global benchmark. However, in our interviews, the respondents said they have never heard of it. Instead, they adopt other practices, such as market surveys, for price comparisons. Unlike the federal facility, the state-run facility does not have a quality assurance laboratory, so they do not test the effectiveness of consumables. The facilities also lack a properly documented SOP. These lapses make for easy distortion of processes to favour a few persons in the system and mean that the system operates more on the discretion of powerful persons. Lack of consensus among the various professionals in the chain makes it difficult to reach agreement on what should be procured. Also, some storekeepers receive incentives to report drugs that are not needed. Sometimes, the storekeepers are not motivated to carry out a proper assessment of drug needs so they just supply a pre-existing list of needed drugs. A pharmacist from the federal facility said:

> *Sometimes, the sales representatives of pharmaceutical companies give the storekeepers incentives so that they will state that there is a drug need for a particular product when the drugs are still in the sub-stores. So, if you don't go to the sub-store you will end up procuring products that are already on ground and this will lead to over stocking [Pharmacist, federal facility]*

There is also the challenge of diseases and outbreaks that will increase the demand for a particular product before the next procurement. In this situation, an imprest is given to pharmacists by the hospital management to purchase these products without following the procurement process. This is an opportunity for corrupt pharmacists to employ pharmaceutical companies based on social and kinship ties and/or the promise of kickbacks.

> *I know they are doing it, the HODs, because they are in charge of signing of LPOs. They can write out orders for some companies to bring in drugs and they say it is emergencies. Because they have power to order drugs as emergencies and that creates rooms for malpractices. But it all boils down to how the procurement is done, if it is done appropriately, it reduces the need for emergency procurement and even if it arises, it would only be on small quantities [Doctor, federal facility].*

Lastly, pharmacists often complained that they do not have oversight functions over the procurement process, which they believed to be part of their role. People in the profession complained about not being signatories to the pharmaceutical procurement account and

[1] International Reference Pricing, also called external reference pricing, is a method of comparing prices of medicines across countries to understand differences in prices.

they do not steer the process. They believe that if they have an oversight function, they will improve efficiency and better steer the process. Currently, the doctors who statutorily occupy top leadership positions in the hospital oversee this process.

4.6.2. Tender

Lack of automation of the procurement chain means that physical contacts are necessitated in the procurement process and such contacts can result in sentimental and biased awards of procurement contracts. In the state facility, we found no quality analytical labs, forcing the bidding committee or the pharmacy to rely on feedback from doctors, information from the open market and other facilities, as well as from the patients. This absence caused one of the facilities to procure a substandard item, and it was never reported that the company was sanctioned. Also, when bids are called for brand names, the implication is that not all companies have a fair opportunity, as previously described.

We discovered that adverts for bid submission are only pasted in the pharmacy unit and are not publicised. Suppliers must come to the point where adverts are pasted. So, procurement officers make phone calls to bidders, so it is possible to contact only those they have a good relationship with. The results of the bidding process are also not published. Bidders who win are personally contacted.

> *We paste the adverts there (pointing at a wall). The sales representatives always visit to know when advert will be out. Of course, once it is out, they call themselves […] for the winners, we have their contacts, so we could contact them [Pharmacist, state facility]*

We found cases of delayed payments to suppliers. This discourages the suppliers from bidding further, creates out-of-stock situations, reduces competitiveness in bidding, and increases the cost of purchase for the hospital. This could be exploited for private gains. The low wages of pharmacists/workers were also identified as a common reason for people seek to make extra income by perverting the procurement process.

The HOD of the Pharmacy Unit has enormous power to influence the procurement process, except when there are multiple players empowered to handle different segments of the process. Without that, the HOD can determine the supplier and the quantity supplied. Our study revealed that the HOD is frequently visited by different pharmaceutical companies with the sole aim of marketing their products. At other times, the HOD deals directly with pharmaceutical companies to make direct purchases. The CMDs also have significant influence: as they are the managers of the facilities, they could influence the process, including by determining who to buy from.

Sales representatives are expected to register their company by paying a fee of N12,000 in the federal facility and N25,000 or N35,000 in the state facility before they qualify to deal with the hospital. This fee will not be refunded, even when their products are not enlisted to be procured. Many companies try to boycott this payment by ensuring that they will be patronised, often through their brands being listed before they pay the registration fee.

It will be painful to register with the hospital and not make any supply. It is why we try to push through any means, at least to recover the money spent on registration. Our company might not be aware that we need to register. So, we could use our personal money to do the registration [Sales Representative, state facility]

4.6.3. Awards and contracts

With the many gaps in tendering stage, awards appear to be compromised, as elite companies and those that offer kickbacks, or those that have established social and kinship ties with those in authority, will be successful. Contracts are awarded from a faulty scrutiny process. First, the absence of quality checkers and certifiers of consumables means that suppliers and their products are not subjected to any form of thorough quality control, yet they are admitted and paid. The suppliers who win bids and are contracted on the premise of faulty processes are sustained in the system with more contracts and may even become the go-to company for direct purchase. There are limited opportunities for newer companies to break into the system, given the restrictive process for admission of suppliers.

During the selection of pharmaceutical companies for award, dosage forms are shared to all members of the procurement committee, some of whom are not knowledgeable about pharmaceutical products. The fact that not all members of the committee are skilled in the process creates room for a few individuals to take over the award stage and select whom they prefer without fully sticking to the procurement principles. The members of the procurement committee are loosely drawn from different hierarchies in the hospital that represent pharmaceutical, finance and hospital leadership/management interests.

The debt challenge in institutions, where pharmaceutical companies are owed a lot of money even after concluding supplies, also creates room for some companies to be favoured above others. First, not all companies want to do business because of fear of being owed. The implication of this is that these companies might have the needed product at cheaper prices and at same quality. Some companies are well known to produce certain brands for certain illnesses and because their product is tested and trusted, it is difficult for board members to accept the introduction of another brand that may in fact be cheaper and may produce a similar effect. So, contracts can be awarded based on the brand, a long-standing relationship and the belief that the company will deliver, despite bidding with the highest price. Similarly, it was shown that the institutions do not recycle or review their EML to meet with current trends. One of the participants said:

One thing I know is that federal institution even when you go they are lazy in practice. Most private institutions will not do that. They know the ones that are efficacious and cost beneficiary to them. By the time they try others that are cost effective and also give you the good result if not better. What is stopping you from not changing? So, the procurement process in a nutshell is not the same. Pardon my language that some of them are lazy, they recycle list but that laziness to edit, remove this and put this alongside this. They recycle EML [Sales Representative, federal facility]

4.6.4. Implementation

It was reported that suppliers could supply items that were not quoted for, which means that they quoted to win, and not to supply. In the state facility, this practice led the procurement team to scale up the involvement of the HOD of the Pharmacy to ensure that what is quoted is what is supplied, to detect such anomalies. The absence of a quality analytical lab also permitted this practice to occur, as there was no appropriate quality check. Fluctuating prices in the Nigerian market owing to the instability of the economy could lead to suppliers using that as an excuse to inflate prices. So, prices that were quoted could be reviewed several times because of the possible price increase that could happen between when they were quoted and finally brought to the facility.

Lack of communication between the pharmacy and the doctors who prescribe is an opportunity for corruption. Doctors prescribe brands that are not available in the pharmacy under the pretext that they are not aware, which they may do to benefit sales representatives of particular pharmaceutical companies, who have those products outside the facility. So, service users justifiably go outside the facility to the specific pharmaceutical stores where the sales representatives keep their products. Finally, work overload on for a senior member of the procurement committee (CMAC) means that adequate supervision and monitoring is compromised.

4.7. Drivers of corruption in pharmaceutical procurement

Inefficient systems, characterised by political capture, incompetent staff, analogue procedures and suboptimal monitoring and supervision, among other issues, are highlighted in several studies as drivers of corruption and barriers to anticorruption efforts (see Bigdeli et al., 2013; Ekeigwe, 2019). In the pharmaceutical procurement sector, these inefficiencies are yet to be explored, although there are recommendations to do so using qualitative methods (see Seidman and Atun, 2017). Nevertheless, as our data reveal, the prevalence of systemic inefficiencies as a driver of corruption does not mean there are no influences based on personal discretionary power. These could be the consequence of systemic inefficiencies, or they could thrive because of the gaps or loopholes created by inefficient systems. These issues are discussed further below.

4.7.1. Systemic inefficiencies

Systemic inefficiencies drive corruption everywhere. In pharmaceutical procurement, a committee that does not meet often creates opportunities for direct purchase, which has shown to be patronage-based, is not monitored and may result in price hikes of pharmaceuticals. It also means that there will be frequent out-of-stock incidences that must be covered, and direct purchase appears the favoured channel to close these gaps. There are

concerns about the DRF,[2] which respondents complained was inefficient. As a result, funds from sold drugs are poorly accounted for, which means that pharmacists and, partly, the hospital authorities could devise a means of reordering that could lead to corruption. Bureaucratic bottle necks stall payments to pharmaceutical companies, which could cause them to cut supplies. To avoid this, pharmaceutical companies prefer to lobby for direct cash purchase, which is one avenue for promoting private interests in procurement. There are also poor feedback channels, except for those patients who can access high-level personnel in the hospital. The absence of proper feedback channel is another aspect of quality control that is missing, leading to a lack of accountability and responsibility.

> *The hospital only calls a particular company and they will supply them. With bidding, it could take like 3 months before a company is chosen and asked to supply. If supplies are finished before the bidding process ends, the hospital and patients suffer [Pharmacist, state facility].*

Those who win bids may refuse to supply and those who choose to supply may do so under conditions that are not transparent. This includes the use of networks to get paid, as well as bribery of the officers in charge of payments. Institutions may also insist on a particular supplier who they think can accept the delay in payment, thereby blocking the other suppliers from a level playing field.

Another major complaint about the current bidding system is that the process is slow and bureaucratic. Finally, the ongoing inflation in the general economy has resulted in fluctuating prices, which some actors in procurement take advantage of to inflate quoted prices for private gains.

4.7.2. Greed and personal interests

In response to the sociodemographic questions, participants all complained about poor salaries and a heavy household burden. This was implicated by some as the reason for indulging in distortionary practices, to make extra money and cater for family needs. There is also the issue of greed, or when people want to acquire money by any means for private gains. When the issue of greed arises, low salary may not actually be a factor; instead, corruption would arise from of a desire to acquire wealth through any means.

> *Greed from the members. For example, sometimes the sales rep takes the doctors out for lunch, shower them gifts and promises, and sponsor them for conferences to that they can continue prescribing their drugs thus creating a need for such drugs. They might also meet some of my colleagues and sponsor them for FIP (Pharmacist, federal facility).*

[2] The Drug Revolving Fund (DRF) is a system of accountability in pharmaceutical procurement within health facilities that emphasises that returns made after the sales of medicines should be used to replenish the stock. Under the DRF, there is an agreed markup that is added to the cost price of medicines.

On personal interests, concerns were raised about pharmacists and hospital authorities who could demand percentages from pharmaceutical companies and their sales representatives in return for influencing the procurement of their brands. How this works is that influential procurement officers sometimes strike a deal with suppliers to collect a certain amount for every unit supplied, in return for helping them to win the bidding. According to one pharmacist:

> *…another hidden factor there is interest of the decision makers there. For instance, if you supply 100 products maybe N1,000 from each cartoon will go to the CMD, another N1,000 will go to the head of procurement or finance [Pharmacist, federal facility].*

4.7.3. Social ties and kinship influences

Social ties can influence who wins bids and who is awarded a contract. A sales representative complained about the procurement system favouring children and relatives of hospital staff who are sales representatives, and those who are Igbo (the dominant tribe in the study location). Some may favour their past course mates. While many sales representatives complained about delayed payments caused by the accounts department, one hailed the department and said that he gets paid early enough because he has developed a good rapport with persons at the payment section. Building relationships and trust is one way of securing business, but it becomes irregular when it involves giving enticing gifts, sponsoring trainings and offering kickbacks to ensure that bids are won and that products are listed. In cases where institutions are known for bad debts, companies with good relationships with top procurement officers supply most pharmaceutical products. This is because social ties can influence how and when a supplier is paid. Suppliers based on social and kinship grounds are favoured by the procurement committee or its members, influencing the enlisting of such brands in adverts or directly purchasing from them.

> *Let me give you an instance, there is one of our customers that does supply to[this facility]. His uncle is the head of x, if I go there as a neutral person, we might have the same volume of brand at the same time, chances are that he will get favoured, most times, it depends on the relationship and leverage you have [Sales Representative, federal facility].*

> *Also, majority of the people in this hospital display favouritism, as we the commoners are always disregarded. If not that I looked for another way of getting the attention of this woman, such as praising her dressing and all that, she wouldn't have given me that time. They favour their people like the Igbo people because I am not from here and it is difficult to communicate in their language or maybe their staff who their relatives or children are into this [Sales Representative, state facility].*

4.7.4. Professional rivalry/brand versus generic prescription

The hospital procures numerous items, but pharmaceutical procurement is the most lucrative and frequent. Medical doctors are among the top-ranking staff in the hospital, and there is evidence of them hijacking the pharmaceutical procurement section, which the pharmacists continue to push back against. Our respondents often refer to the pharmacy department as the 'money minting department', because the pharmacy department generates more money than any other department in the institution. This explains the enormous interest in pharmaceutical procurement and why it is most often implicated in corruption.

An important example is the regular prescriptions from doctors for brand-name drugs. The hospital pharmacy complains that the brands they prescribe might not be in the hospital or might be expensive, with cheaper substitutes available. However, because the doctors have made an agreement with the sales representatives or their companies, they insist on those brands, and tell patients to go out of the hospital to some nearby pharmaceutical stores where they have been told by the sales representatives that their products are kept. In return for continuing to prescribe brands, doctors ensure that sales representatives renew their payments to them, and may even make prescriptions based on the amount that is paid. When adverts for bidding are published for brand-name drugs, it is an indicator that a particular brand is being favoured. We found evidence of rivalry among pharmaceutical companies, who are constantly making efforts to win bids. This pitches the companies against each other as they struggle to dominate each health institution.

> *...because you as a doctor when you have a serious case and you want to write ceftriaxone, you want to be specific and you write the brand...[But also for personal interest may come in…?] Yes [laughs] Of course it comes in... [Doctor, state facility]*

4.7.5. Pressure from sales representatives

Pharmaceutical companies often set targets for their representatives, which serves as a condition for job retention and promotion. Their products could be in the hospital or outside the hospital (nearby pharmaceutical shops), or both. The goal is to sell the products, either in a broad or narrow market. Sales representatives make sure their brands are listed by the committee responsible for procurement, prescribed by doctors and dispensed at the hospital pharmacy (as pharmacists could convince patients against certain brands). Sales representatives do this because they are pressured to make sales, and following the rules is considered less important, especially if rule-following does not mean increased sales. Our respondents revealed that this is more common among local pharmaceutical companies because sales representatives in multinational companies are regulated through compliance policy. One of the sales representatives described it this way:

> *It's true, everybody wants to make sales but not all companies are willing to compromise despite the desire to make sale. For multi-national, it's a law, they called it compliant policy. It is part of the training you receive when you come on*

board. They will train you that there are some certain things you will not do, there are certain things you will not say and if you are caught doing it, it doesn't matter if are the best sales rep ever. It's about integrity, about doing the right thing…, when you are caught doing it, just automatic sack letter [Sales Representative, federal facility].

Some company pays on condition; how much target you need. For instance, you see someone that is working so hard and you know they depend on you, everyday they come to you and say, 'I have not sold… I have not sold, even if it is #500, at the end, if you give in you have already introduced bias [Sales Representative, federal facility].

Even after a sales representative makes a sale, they must lobby the accounts section to get paid, so that their companies can be sure that sales have truly been made. They do this by bribing accounting personnel, often from their own pockets. This could explain why sales representatives sometimes keep their products in pharmaceutical shops that are close to the hospital, expecting doctors to refer patients to such sites. The idea is to at least make sales and provide returns to their companies, which is essential to keep their jobs. Also, the sales representatives do collaborate among themselves, to share secrets and make sales to each other. Finally, some big companies lobby to have their products procured by the hospital.

4.8. Evaluation of the procurement process

Evaluation of the procurement process produced two views: that the process is complex and difficult to follow; and that the process is simple and serves its purpose. The complexities were seen as bottlenecks in the process that often lead to delay and unaccountability. Meanwhile, the process is judged to be simple by those who believe that it is fair, open and transparent.

4.8.1. Complex, difficult to follow and inefficient

The official way of procuring, which is expected to be competitive bidding, is seen as complex and difficult to follow by those who feel that it creates little or no room to cheat the system or that it delays purchase of medicines because due process must be followed. The unofficial means of procurement, which entails listing brands in adverts or direct purchase, is considered less troublesome and more financially rewarding, in the form of payments to procurement staff and quick and uncompetitive sales for the pharmaceutical companies. There is a preference for the unofficial procurement among the sales representatives. When bidding is evaded and supplies acquired through direct purchase, the process is fast and closes the out-of-stock gap. On the other hand, if bidding is carried out correctly, there is a consensus that it is slow, especially because the committee do not meet frequently in the case of the state-run facility.

Bottlenecks also arise throughout the procurement process: budgeting and planning, award, and so on. In the case of the federal facility, each member of the committee is required to provide input into the dosage forms that they receive at the end of the bidding, which can

be tiresome for the members. After making their inputs, a series of meetings is held to deliberate on the dosage forms and make awards to the pharmaceutical companies that enter bids. One participant described the complexities this way:

> *But sincerely, the bottlenecks are much; it is difficult for the suppliers, it is also difficult for us. Then all these bottlenecks of go here and there. By the time the thing comes out, you get so frustrated [Pharmacist, federal facility]*

From a contrasting perspective, some believe that the slowness of the process is designed to ensure that the institution avoids irregularities. They also indicated that their system is designed to check on every member of the committee to ensure no single person influences the process for their personal interests.

4.8.2. Simple and efficient

Some of the respondents said that the procurement process is simple. Most of these respondents considered that it should not be difficult to follow the requirements of competitive bidding, which entail submitting bids for generic-advertised products using the prescribed guidelines and waiting to be declared a winner, or not. They also argued that the process is simple because it is fair and verifiable, in the sense that companies can request the bidding assessment criteria to understand why they did not win a bid. However, this was not verified by sales representatives, who described the procurement process as secretive because only the committee understands who wins and why they won, and highlighted the insistence on using brand names to advertise the call for bids.

4.9. Who is affected by pharmaceutical procurement corruption?

Patients are considered to be the worst hit by procurement irregularities. Patients may buy pharmaceutical products for higher prices, or purchase substandard and expired products, which could lead to mortality. At the same time, when substandard products are used to treat patients, the credibility of the doctor and reputation of the hospital are at stake. Also, frequent stock-outs would mean loss of revenue for the hospital, as patients must buy pharmaceutical products from private pharmacies outside the hospital. Sometimes, these private pharmacies are owned by the hospital staff or connected to them in some way. On the other hand, cases of overstock could imply wastage, especially when the products expire, and this negatively impacts the revenue of the hospitals. Thus, it is important that hospitals devise a means to deal with products that could expire before use. This can be achieved by curtailing the incidents that cause overstocking, such as inaccurate generation of inventories and poor understanding of the demand trajectories of drugs. In unavoidable circumstances, hospitals can freely share medicines that close to expiry to surrounding health facilities that may need them. It is important that procurement staff are aware of the manufacturing and expiry dates of products under their custody.

When the procurement system is less efficient, staff could experience poor job satisfaction. When personal protective equipment is not procured or badly procured, it could lead to staff contracting communicable diseases or, in extreme cases, death. To prevent this from happening, some staff go as far as staying away from work to save their lives. A doctor explained it this way:

> *It can be very embarrassing when you come to an institution; even few cases of deaths at this hospital, doctors run away from suspected cases and allow the patient to die because they don't have materials on ground for medical practice [Doctor, federal facility]*

There may also be a loss of trust in the pharmaceutical unit by co-workers who do not trust what is happening there, and so recommend their clients to get drugs elsewhere. As a result of procurement corruption, patients may prefer to get their medications outside the hospital, leading to the loss of revenue in the hospital.

Finally, sales representatives who do not make sales could lose their jobs or be denied incentives at their workplace. Bad procurement or corruption in the procurement process also creates a system where hospitals have large debt profiles. Many individual suppliers and pharmaceutical companies have gone out of business because of bad debts. As such, many suppliers are wary of doing direct business with hospitals because of the difficulty of getting paid:

> *I have not done much with them because of issues of debt. The first time I join the company 5 years ago, in our induction and training we did at Lagos, they told us don't go and do direct business with this hospital [the federal facility]. I don't know how people that do business with them get their money. If you get their suppliers, let them buy from you [Sales Representative, federal facility].*

4.10. What can be done to address pharmaceutical procurement corruption?

4.10.1. Horizontal solutions

The best use of an active procurement committee is to ensure adequate representation and prevent lone voices from determining what happens in procurement. For instance, in the federal-run facility, the pharmaceutical products needed by the institution are broken into sections and each section is handled by separate teams, each with a team leader (there is a lead for tablets, syringes, etc.). This is in addition to the committee that involves all the heads of units, the account department, audit department, CMD, HOD of Pharmacy, the procurement officer and quality control. With so many people, it will be difficult for bribes to influence procurement. A doctor said:

> *If there are more people, the chances of eliminating bias is high, how many people can you influence. If it is small you can influence them [Doctor, federal facility].*

There are calls to ensure that the procurement committee meets often to minimise the use of personal discretion in procurement. Thus, the goal should be for the committees to meet more often to reduce the frequency of direct purchase, which has been shown to be prone to corruption. In cases where direct purchase is inevitable, the CMDs and CMAC should be able to monitor purchase and supply.

As the doctors complained about not knowing what the facility has in stock, a list of available brands in the facility should be circulated among the health workers. This will address the lack of awareness of what is available. Next, meetings should be held with the doctors to discuss the facility's stock and identify the need for additions, while taking cost and potency into consideration. This is a further reason why facilities should have quality assurance laboratories to help support informed decisions on the potency of medicines. It is also important that the DRF should be enforced, so that prices can be regulated and procurement meets certain standards. Feedback from patients is also useful for quality checks, as this was lacking in the study location.

Another important horizontal solution is to involve more pharmacists as decision makers in the procurement process. Our data showed that pharmacists are powerful enough to do this and could organise to address certain excesses observed in the system. For instance, a pharmacist describes how they organised to reject drugs procured by doctors:

> *The doctors have once tried to procure drugs without the pharmacists but we rejected those drugs. This happened like 3 years ago. They have already colonized the bidding process but we can't let them take over the procurement process as well [Pharmacist, state facility].*

Yet another internal mechanism is decentralisation of the procurement process. Having sub-procurement units in each unit of the hospital (e.g. ophthalmology, dentistry, internal medicine) will ensure that units are more sensitive to their stock and prevent stock-outs. The ophthalmology unit in the state-run facility was cited as a good example of the success of decentralisation.

> *We do not have this problem of stock-out…somehow our unit [ophthalmology] have managed to get a separate or if you like semi-autonomous system, where we manage our stock. Because our drugs are somehow different from the ones others widely use, we are allowed more control of what we procure [Pharmacist, state facility]*

4.10.2. Vertical solutions

The government should assist with improving storage facilities to remove justifications for out-of-stock situations. Salaries and incentives should also be increased, and more staff should be employed. This would improve work conditions, which are always implicated as drivers of corruption. There were calls for the pharmacy department to handle the funds they generate within the institution. This is quite ambitious and problematic because of the Treasury Single Account (TSA), which means that all government institutions (federal

institutions, including the federal facility in focus) use a single account. The problem is that it prevents the pharmacy department from paying pharmaceutical companies as and when due, because all funds in the institutions are put into a single account and disbursed for issues that may or may not be related to pharmaceuticals. However, ensuring that funds generated through DRF are exclusively used for that purpose could resolve the issue around funds.

It was also suggested that the government should build and strengthen quality assurance units for institutions where they do not exist, including the state-run facility. The idea is that an efficient quality assurance unit will not only identify fake pharmaceutical products, but also serve as a check to pharmaceutical companies who supply their products without following due process. The quality assurance unit usually tests all pharmaceutical products to ensure that they are of acceptable quality before they advise the finance department to make payments for the products.

Other suggested interventions emphasised digitalising the entire procurement process to reduce human interactions. The SOP should also be documented, and the procurement committees should increase the number of times they meet so that procurement can take place more frequently, allowing little or no opportunity for direct purchases, which are often implicated in corruption. The pharmacy professionals should be more involved because pharmaceutical procurement falls within their expertise. Also, there should be improved systems for procurement that increase the quantity of procured pharmaceuticals and supplies with long expiration dates should be procured to reduce out-of-stock incidences, which findings have shown are an opportunity for corruption.

The use of the EML by the procurement committee was identified as playing a huge role in improving efficiency. There was the suggestion of creating an inter-unit surveillance system, where staff can monitor and report what is going on in other units. Also, success stories can be shared across the units. Finally, decentralising the procurement process by having sub-procurement units in each unit of the hospital (e.g. ophthalmology, dentistry, internal medicine), will ensure that the units are more sensitive to their stock and prevent stock-outs. The ophthalmology unit in the state-run facility was cited as a good example of the success of decentralisation.

4.10.3. Non-state actors and the media

While some respondents feel that strengthening procurement should be within the ambit of the hospital and under state influence, others were sure that non-state actors including academics have roles to play, particularly in bringing the procurement activities to the public domain, which would improve transparency. Participants suggested that engaging NGOs and the media in monitoring the pharmaceutical procurement process and possibly publicising their observations may help to improve awareness and stimulate potential for action where the activities are corrupt.

4.10.4. Evidence of successful interventions

Evidence showed that the ARV section and some parts of the pharmaceutical section of the hospital were digitalised. The ARV section reported a seamless procurement process and easy monitoring because they are digitalised. For the hospital pharmacy, digitalisation only covered knowing what is in and out of stock within the pharmacy. Digitalisation is yet to cover the bidding processes. Notwithstanding the good reports from the ARV section, participants from this section mentioned non-pharmacy professionals manning the end of the system who might sometimes not understand the urgency of procuring certain medications.

Evidence also showed that bidding helps with improving prices because best prices are factored into the evaluation of submissions. However, the process must be transparent and open to all. One of the ways both facilities ensure transparency is by locking bids in a box and only opening them before the committee for everyone to see. However, the problem, as reported, is the infrequent meetings of the committee. If the committee can sit often, bids can be dealt with regularly, which reduces discretionary actions and the need to always procure under the guise of emergency. To help with improving the frequency of meetings, digital platforms can be used, including by allowing bids to be submitted digitally. Importantly, meetings will make more sense when bids are called for using generics, as demanded by the NDP. This will allow more options and a strong sense of fairness will be communicated across the system.

Bringing different persons into the procurement committee helps with checks and balances. The presence of multiple units makes it difficult for undue influence to be exerted. In addition, when a bill is signed by the pharmacy unit, it moves to the offices of different people in the procurement process. Because some officers intentionally withhold the bill so that it can be settled by the sales representatives, a policy was created to regulate the number of days that bills can sit in offices and prevent individuals from delaying the process. In the federal facility, we found that even when one pharmaceutical company is favoured over another, they must pass through the quality control unit. In some cases, they fail the quality test and the drugs are returned to them. This quality control system was found to be lacking in the state facility.

5. Discussion

The study examined the nature of corruption and its enabling factors in the procurement of pharmaceuticals in tertiary institutions in south-eastern Nigeria. It showed that corruption exists in the procurement of pharmaceuticals and is exacerbated by systemic inefficiencies, and weak, ill-enforced and nonregulated procurement guidelines. Consequently, hospitals make redundant purchases and lose money, while patients pay high costs for care and/or purchase substandard pharmaceutical products. Drawing from the experiences of procurement officers, sales representatives and several actors in the procurement chain, the study established that similar experiences of unaccountability in the procurement of pharmaceuticals exist in both federal and state tertiary health institutions. The identified inefficiencies within the system appear to be replete in literature (Bigdeli et al., 2013; Chuku et al., 2016; Ekeigwe, 2019) but investigations that offer insights into how they manifest are lacking. Our study set out to address the lack of in-depth research into the subject of unaccountability and corruption in pharmaceutical procurement in Nigeria.

An important finding in this research is the negligence or unawareness of national policy guidelines on procurement. Principally, policies such as National Supply Chain Policy for Pharmaceuticals (NSCP) and the National Drug Policy (NDP) were not in use in either facility. References should be made to these policies when the respondents were asked about SOPs guiding their practice, yet none mentioned any of the policies. The roles of the Directorate of Pharmaceutical Services and the Logistics Management Coordinating Units at the state level were not mentioned either. This points to the lack of enforcement of these policies, and further, that those the policies are meant for may not be aware of their existence. Moreover, the NSCP, which was published in 2016, was expected to be revised three years later (Federal Ministry of Health, 2016), but that has not yet happened, further showing negligence of the policy even by those who set the standards.

Our respondents indicated that the current systems of procurement follow the recommended guidelines; however, no document was provided to support this claim. At most, the respondents described the process in ways that appear as a norm rather than the rule. There were reports of shifts in the process and different institutions applying flexible practices at each level. A similar finding was made by Kjos et al. (2016) in their study of the Vietnamese pharmaceutical system, where they observed that although government policy influences the framework guiding the procurement process, each level is allowed some flexibility. However, in the context of this study, we observed that the NDP, which should be the backbone of the pharmaceutical supply chain, exists only as paperwork. The policy was last revised in 2003 and published two years later (2005), and since then, nothing has been done to update or enforce it. Thus, the good intents of the NDP in terms of favouring competitive bidding, efficient use of the DRF, utilisation of EML to guide procurement, and the use of generic rather than brand names in prescription and advertising were found to be non-existent in the current procurement practice of the hospitals. It might be fair to say that pharmaceutical procurement practice in Nigeria is bereft of any policy framework, as evidenced by our findings. This inability of policy documents to prompt action due to poor policy exactness has been identified across Nigerian policy documents (Onwujekwe et al., 2021).

Our findings also show that, despite reporting knowledge and use of the EML, procurements are not always guided by the list. For instance, medicines not on the EML constantly appear in prescriptions of medical doctors, suggesting that the list has not been properly enforced because most of the doctors have not received guidance on the EML or the standard treatment guidelines. This is despite the fact that the EML is regularly updated in Nigeria by the National Drug Formulary/Essential Drug List (NDF/EDL) Review Committee, most recently in 2020 (Federal Ministry of Health, 2020). In addition, we found that some doctors have been compromised by gifts from sales representatives to influence their prescription patterns. Prescriptions made by these doctors could influence the pharmacy to enlist a repeatedly prescribed brand for procurement, or the facility could lose resources to the open market when patients buy the product outside the facility. Influencing doctors happens because sales representatives are under pressure from their employers to make sales, which sometimes determine their pay and promotion. Vian (2008) wrote extensively on how pressures can influence people to engage in corrupt practices in health institutions. The pressure is even higher in Nigeria, where unemployment is high and many people are willing to do anything to keep their jobs.

During the planning stage, storekeepers work hand-in-hand with heads of budgeting and planning to generate needs or identify products to be procured. Our findings revealed that sometimes this is poorly done, leading to the procurement of medicines that are not needed or already exist in the store. In some cases, storekeepers are compromised by sales representatives to report out-of-stock for products that are actually in the store. When such products are eventually procured, it increases the quantity of the product in the institution, with a high chance of expiration and wastage. Respondents also believe that it is easier to compromise storekeepers and those at the audit section because their salaries are lower than those of pharmacists (Onwujekwe et al., 2019).

One of the major problems our study identified across the board is the irregular meetings of the procurement committees, who need to approve major procurement decisions. When members of the committee do not meet regularly, it creates a vacuum for drug need and sometimes forces the pharmaceutical department to report out-of-stock of medicines until the next procurement or to collect imprest for emergency purchase. While there are genuine cases for emergency purchase (i.e. the COVID-19 pandemic), the frequency and rate of these occurrences could suggest bad procurement practices or that certain actors intentionally delay sittings for personal gains. Emergency procurement does not follow the set procurement guidelines, allowing room for favouritism, kickbacks and bribery, occurring between top persons within the procurement chain and pharmaceutical companies. We found that sales representatives could be personally contacted to supply products with an agreement to pay top pharmacists kickbacks as compensation. Moreover, in this scenario, social ties and networks could affect the selection of the company to supply the needed products. In this context of leveraging fast and urgent supplies, we recognise the functionality of corruption during emergencies (Marquette and Peiffer, 2020). This helps to curtail stockouts by ensuring availability of medicines during critical moments, which could be life-saving. However, it is a concern when this happens in non-emergency situations or when proactive steps are not taken to ensure drug availability.

We found that pharmacists are heavily involved in the procurement process, and that this played a significant role in the reduction of irregularities, but they are side-lined from handling funds generated by the pharmacy unit. Moreover, they do not resolve sales, neither are they signatory to the hospital's account. Participants expressed a need for pharmacists rather than doctors to head the committee on pharmaceutical procurement across the hospitals, so that they could develop and maintain standards. The fact that all funds generated in the hospital are placed under one account, following instruction of a TSA by the federal government, makes it difficult for the pharmacy department to pay companies supplying pharmaceutical products. This challenge was earlier identified by Odewole (2016), who found that teaching hospitals face the challenge of reconciling the TSA for revolving funds, due to multiple inflow and outflow of funds into a single account. When suppliers are not paid, it discourages others from supplying and creates a system where those with networks and social ties choose to supply because they know how to collect their money. It also leaves room for selective bidding, where some pharmaceutical companies are personally contacted to bid while others are left behind.

It is important to note that many efforts are in place to curtail corrupt practices in the procurement of pharmaceuticals. These include the use of the EML, standard treatment guidelines and the use of the procurement committee, as well as forcing all pharmaceutical products to undergo quality control (as observed in the federal facility). The EML was only recently adopted by the institutions, so it is still in the embryonic stage. However, there is possibility of improvement with time, especially with a strong commitment from the procurement committee, as observed in the federal facility. There is a breakdown of the procurement process into many units, with different people handling each unit. While this process has made it difficult for sales representatives to bribe their way through the process, it also frustrates the process through bureaucracies and unnecessary delays.

While we acknowledge the importance of paying incentives to pharmacists and other workers in the procurement chain, we also suggest the need for those in authority to make the process more transparent. There were reports of secrecy and irregularities, which can be reduced by a transparent process. We recommend a horizontal approach, where NGOs and the media act as pressure groups to urge hospital management to be more transparent in the bidding process.

Our findings of corruption in the procurement of pharmaceuticals may have been amplified by the COVID-19 pandemic, considering that corruption has been known to thrive during medical emergencies (Kohler and Wright, 2020). The need to address irregularities observed in the procurement process is more pronounced now than ever due to the economic and health implications of the crisis. The study is limited by data being collected in one region, and results may not be representative of events across the nation. We recommend a more representative study, especially one that underscores contextual differences in the procurement of pharmaceuticals across facility levels and location.

6. Conclusion

The study has shown that the pharmaceutical procurement process is not completely transparent, as we found evidence of malpractice and irregularities in the process. Improving transparency in the process is important for health outcomes in Nigeria, as it will optimise seamless access to medicines and medical equipment. Transparency in the procurement process is key and requires the efforts of state and non-state actors, including actors within the hospitals. It also presents a wake-up call to policymakers and policy enforcers to consider enforcing current pharmaceutical procurement policies in Nigeria.

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