**Type: Original Article**

**Where Do We Start? Building Consensus on Drivers of Health Sector Corruption in Nigeria and Ways to Address It**

**Abstract**

**Background:** Corruption is widespread in Nigeria’s health sector but the reasons for its existence and persistence are poorly understood and it is often seen as intractable. We describe a consensus building exercise in which we asked health workers and policy makers to identify and prioritise feasible responses to corruption in the Nigerian health sector.

**Methods**: We employed three sequential activities. First, a narrative literature review identified which types of corruption are reported in the Nigerian health system. Second, we asked 21 frontline health workers to add to what was found in the review (based on their own experiences) and prioritise them, based on their significance and the feasibility of assessing them, by means of a consensus building exercise using a Nominal Group Technique (NGT). Third, we presented their assessments in a meeting of 25 policy makers to offer their views on the practicality of implementing appropriate measures.

**Results**: Participants identified 49 corrupt practices from the literature review and their own experience as most important in the Nigerian health system. The NGT prioritised: absenteeism, procurement-related corruption, under-the-counter payments, health financing-related corruption, and employment-related corruption. This largely reflected findings from the literature review, except for the greater emphasis on employment-related corruption from the NGT. Informal payments and employment-related corruption were seen as most feasible to tackle. Frontline workers and policymakers agreed that tackling corrupt practices requires both vertical and horizontal approaches.

**Conclusion**: Corruption is recognized in Nigeria as widespread but often seems insurmountable. We show how a structured approach can achieve consensus among multiple stakeholders, a crucial first step in mobilizing action to address corruption.

**Keywords**: Health Sector Corruption, Nigeria, Nominal Group Technique, Priority Setting

 **Key Messages:**

* Health sector corruption is damaging, and may seem intractable with no obvious solution.
* The NGT is a good evidence-based approach to create in-roads into understanding thriving types of corruption within health systems.
* Vertical and horizontal anti-corruption approaches are necessary in reducing health-sector corruption

**Introduction**

Corruption, has been defined as the abuse of entrusted power, such that a person, group, or organization acquires undue benefits. These may be financial, material, or non-material.1 Health systems are especially susceptible, 2,3 often with life threatening consequences. Yet corruption in the health sector is often seen as intractable. Identifying what type of corruption and the actors who should be in focus is as a good approach to begin engaging and tackling health sector corruption.4 We report how we achieved consensus on the leading types of health sector corruption and potential measures to tackle health sector corruption in Nigeria.

Corruption in the health sector is propagated and sustained by a complex web of interacting factors.5,6,7,8 It thrives where frontline workers are poorly paid and lack resources to meet the needs of their patients, in settings characterized by weak governance structures and processes, lack of transparency, and ineffective accountability mechanisms.5-8 It is also common among those involved in procurement of resources where oversight is weak.9 Many types of health sector corruption can become normalized through custom and practice. It is facilitated by the invisibility, other than to those directly involved, of many health care interactions, compounded by power and information asymmetry between providers and consumers of care.10

Nigeria ranks 148th out of 180 countries on the Transparency International 2018 Corruption Perceptions Index [CPI].11 Its health sector has been identified as one of its most corrupt sectors.2 This has been attributed to weak governance structures and accountability.12 Several studies have implicated corruption in adverse health outcomes,13 and it features frequently in studies of barriers to effective care.14,8,1,7,12 It is now attracting much discussion in the Nigerian health policy arena, with the media portraying it as a threat to Nigeria’s achievement of the health-related Sustainable Development Goals.15,16 If these concerns are to be turned into action, however, it is necessary to achieve a consensus on the most harmful manifestations of corruption and what can be done about them.

Traditionally, scholars and activists have advocated measures seeking to improve accountability and transparency throughout the health system. These can be vertical or horizontal. Vertical approaches involve promulgating rules and regulations to create accountability, provide checks and balances, and both sticks (dismissal, fines etc.) and carrots (incentives, perks or recognition for complying with regulations etc.). Horizontal approaches include collective agreements, codes of conduct, or informal contracts between health workers and managers forged by professional organisations, labour unions, community champions or grassroots movements. However, the evidence of effectiveness of these measures is weak.1 Measures such as barring gifts from the pharmaceutical industry to health workers, enhanced internal control procedures in community health centers, and regularization of co-payments combined with action against informal payments have had mixed results.1,17,18 Context is important. Despite its intuitive appeal, measures to increase transparency and accountability may bring limited benefits where the ability of authorities to enforce rules is limited and key actors see few benefits in rules being enforced.19 A more pragmatic approach drawing on political economy and institutional economics,19 provides two insights for future directions in anti-corruption intervention. First, some forms of corruption are much more detrimental to the functioning of public services than others, so health gains from targeting them are likely to be very high. Second, some are deeply entrenched, serving the interests of powerful individuals and groups, requiring major political change that is difficult to achieve.

We report a study that sought to redress corruption by synthesizing the evidence on health sector corruption in Nigeria, capturing the types, drivers, and actors that can be engaged in anti-corruption efforts. We then sought consensus on priorities for action, considering the significance of each type of corruption and the feasibility of solutions.

**Methods**

Ethical approval was obtained from the Health Research Ethics Committee of the University of Nigeria Teaching Hospital (Approval No: NHREC/05/01/2008B-FWA00002458-IRB00002323) The most detrimental corrupt practices in the Nigerian health system were systematically identified. The corrupt practices were prioritized, and finally, feasible strategies to address the corrupt practices were generated and discussed.

Stage 1: Literature review

We conducted a systematic review of the literature on corruption in the health sector in Anglophone West Africa. This will be reported in detail elsewhere, (paper currently under review), and the main findings are discussed in a technical report (Onwujekwe, et al., 2018). The review identified 61 papers, of which 50 were from Nigeria. These papers described a variety of corrupt practices, with absenteeism, diversion of patients to private facilities, procurement irregularities, informal payments, and theft of drugs and supplies among the most prominent. From it we extracted those papers covering Nigeria and reviewed them in detail to ascertain: (a) types of corrupt practices that had been reported specifically in the Nigerian health system and evidence of their impact on service users; (b) incentives/disincentives (including policies and regulatory frameworks) for corrupt behaviour among frontline health workers and health facility managers; (c) strategies that constrain corrupt practices by frontline health care providers and their managers; and (d) roles of powerful organizations, lobbies, networks, associations, and influential individuals who may enable or obstruct the enforcement of existing legal and regulatory frameworks. This review was then used to inform the next step, consensus development, where it was supplemented with findings from a previous systematic review we had undertaken to identify measures proposed to address corruption in the health sector.20

Stage 2: Nominal Group Technique exercise

A Nominal Group Technique (NGT) was employed to build consensus among frontline health workers on corrupt practices that were most detrimental to the functioning of the health system. NGT is a group consensus-building method that aggregates the opinions of individuals with experience of, or important perspectives on, the phenomenon. A NGT provides an opportunity to canvass diverse views and, through a series of steps, develop consensus.21 Its structured process helps to reduce the influence of dominant speakers in group interactions, ensuring that individual voices do not skew the debate. Hence, all participants are given an opportunity to contribute equally.

Twenty-one frontline health workers (15 males and 6 females) from Enugu state and the Federal Capital Territory Abuja participated in the NGT exercise. They were purposively selected to represent different categories of health workers in the three tiers of healthcare (primary, secondary and tertiary). They included: medical doctors, pharmacists, nurses, midwives, radiographers, laboratory scientists and physiotherapists. Signed informed consent was obtained from each participant before the exercise. The discussions were audio recorded, backed up with hand-written notes. A team of 3 experts with experience in using NGT for policy design facilitated different segments of the discussion.

Table 1: Nominal Group Process

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| 1. Introductions & background (10 minutes) – overall
2. Silent Generation – (15 minutes)- participants use post cards to write their list of corruption without interacting with other participants.
3. **Round Robin** –1 idea per person up to 3 rounds (no more) (30 minutes) Facilitator write up suggested corruption types on a flip chart, research team members to write into computer.
4. **Clarification of ideas with participants** (20 minutes) – Facilitators condense ideas and transfer to a computer for slide presentation.
5. **Re-present the condensed options as a list** – condensed versions (5-10 minutes) up to 10
6. Participants write down top 5 options silently on a card (5 minutes)
7. **Silent ranking** – done individually, each participant ranks for ‘most important and most feasible to address’ (10 minutes)
8. **Collect index cards**– **partners to** add data to the computer. (10-minute break for participants)
9. Start of discussion while rankings are aggregated (20 to 45 minutes)
10. **Re-ranking results** – from original list (15 minutes)
11. **Present results** – display computer screen
12. **Final discussion** – guided by facilitators
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The NGT exercise was conducted in Abuja, Nigeria, in April 2018 (Table 1). Participants first heard presentations of findings from the literature review and a summary of current debates on corruption, and anticorruption strategies in health sectors of low and middle income countries (LMICs). They were then briefed on the purpose of the study and the NGT was explained. Participants were asked to individually generate a list of corrupt practices they have witnessed or know to be occurring in Nigeria’s health sector (‘silent generation’). Contributions were made in a round robin style, going around the table three times. During each round, each participant was asked to mention only one corrupt practice from his/her list, which was written on a flipchart, noting any repetition. Participants were encouraged to simply describe the practice and not to debate how prevalent or problematic it was at this stage. Each idea received a score of ‘1’ if different from previous suggestions. At the end of the third round, a list of 49 corrupt practices was derived, and participants were asked to clarify some of the concepts and wording rather than discuss their reasoning behind the ideas, thus reducing the chance of unconscious bias.

The initial list of 49 corrupt practices was refined and condensed by merging and linking similar ideas. Participants were asked to reflect whether the condensed list represented the true picture of practices identified and to include any practice that was missed. Having agreed on a comprehensive list of 19 distinct corrupt practices, each participant was asked to select 5 and to rank them (on index cards) from most important to least important, considering their significance and harm (prevalence and impact on health). Votes were entered into an Excel spreadsheet and the top five types of corrupt practices were automatically generated using an algorithm. Numerical scores were generated by multiplying number of votes by weights based on reverse order of rankings. Thus, if ten participants ranked absenteeism first among the top five, the weighted score would be 10 x 5 = 50. If 8 participants ranked procurement-related corruption in fifth position, the weighted score would be 8 x 1 = 8. The totals for each type of corruption were then summed.

The aggregate initial rankings were presented to participants for discussion and clarification of inconsistent results. In the final stage, participants were asked to re-rank their original top-five ideas, this time, based on how easily they can be addressed (given existing political and institutional contexts). Their responses were again entered into an Excel spreadsheet and the summary scores computed. Changes in aggregate rankings were computed and fed back to participants.

Stage 3: Stakeholder workshop

We conducted a stakeholder workshop with senior healthcare managers and policymakers the following day to validate the findings, to explore further the drivers of corruption in the health sector, and to operationalize measures to combat corruption among frontline health workers. Using a structured process of prioritizing with discussion, and working within small groups focused on the key corruption practices, the workshop provided an opportunity for participants to reflect on: (1) the ranked list of corrupt practices among frontline health workers, (2) socioeconomic, political and institutional drivers of these corrupt practices, (3) anticorruption measures that have the potential to succeed, and how they could feasibly be implemented given existing policy and regulatory frameworks, and (4) powerful individuals or groups whose positionality could enable or obstruct enforcement of anticorruption measures.

Twenty-five participants (19 male and 6 female), comprising senior healthcare managers and policymakers from government organizations/agencies, and representatives from international organizations and bilateral agencies, attended the workshop. These included the Federal Ministry of Health, Enugu state Ministry of Health, FCT Department of Health, National Primary Health Care Development Agency [NPHCDA], National Health Insurance Scheme [NHIS], World Health Organisation [WHO], and United States Agency for International Development [USAID], as well as representatives of two anti-graft agencies, the Independent Corrupt Practices Commission (ICPC) and Economic and Financial Crimes Commission (EFCC).

The one-day workshop consisted of informative presentations, a group activity, and a plenary discussion. Having informed participants of the purpose of the study and objectives of the workshop (“to reflect on prevalent corrupt practices among frontline health workers in Nigeria” and “to identify practical and feasible interventions for curbing these practices”), the findings from the narrative literature review and NGT were presented. Participants were then assigned randomly to three groups (A, B and C) for facilitated participatory discussion about drivers of specific corrupt practices and measures for mitigating or preventing their occurrence. The groups focused on the top 5 corrupt practices identified in the NGT process the previous day. Feedback from groups was followed by plenary discussion about the feasibility of implementation of suggested anti-corruption measures, and potential influence of powerful groups and individuals.

Findings from the workshop were synthesized and compared with findings from literature review. Consistencies and inconsistencies across methods are reported in subsequent sections of this paper.

**Findings**

Literature review

The literature review is described elsewhere.20 In brief, we searched PubMed, Researchgate, Hinari and Google Scholar. Studies were included initially if they were: (1) published between 2007 and 2017; (2) focused on corruption within Anglophone West African countries; and (3) written in English or with an available English translation. For this study we extracted those concerning Nigeria, most of which were published after 2010. The largest share involved quantitative surveys while a few made use of qualitative data from in-depth interviews, observations, documentary reviews and other exploratory methods. For the present study we focused primarily on the qualitative studies identified in that review as they provided insights into the drivers of corruption most relevant to our objectives, harnessing rich information from lived experiences of providers, their managers, and clients. Table 2 summarizes characteristics of the top five recurring corruption concerns. Only a few studies actually evaluated the measures proposed.22,17 We summarise the measures identified in Box 1.

Table 2: Types of corruption reported in the Nigerian health system

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| Corruption type | Manifestations  | Drivers/causes |
| Bribery & informal payments | Bribes taken to let patients jump queues;23 give priority treatment to patients;24 Charges for supposed free services;25 Bribes taken to cover erring staff and fast-track promotion of health workers.26  | Normalization of bribery by service users who gain quicker services;5 Prevalence of out-of-pocket payments;27 Poor pay of health workers;1 Absence of an automated system of payment.25 |
| Absenteeism  | Health workers not turning up for work at all;13 Turning up late;28 Leaving workplace before closure time;29 Deliberate idleness at workplace.30 | Weak rules that check absenteeism;28 Transport difficulties/geographical location of facility;31 Poor pay of health workers to fund transport cost;25 Political protection against sanctions;26 Dual and private practice.32 |
| Theft/diversion of money, drugs and medical supplies | Selling supplies for public consumption privately, and with extra cost;33 Selling substandard products to patients while retaining quality ones for private sales;28 Withholding free hospital supplies from patients and selling self-owned supplies in place of free supplies;33 Embezzlement of healthcare funds.5  | Dearth and weak enforcement of existing consumer protection laws;17 Prevalence of out-of-pocket payments;27 Ignorance of service users.34  |
| Drugs and medical equipment procurement malpractices  | Supply of substandard products by contractors;29 Political considerations in securing procurement contracts;30 Illegal sales of supplies to facilities for private profits;26 Releasing seized substandard consumables after collection of bribery;35 Taking kickbacks to prescribe and sell a particular product to patients, even if not appropriate;35 Impersonation of licences by non-pharmacists.35  | Absence of consumer protection measures;17 Weak enforcement of procurement laws;35 Poor understanding of procurement processes by staff and poor record keeping and store management;26 Inappropriate cordial relationships between health agencies and hospital management boards;13 weak monitoring mechanisms.35 |
| Diversion of public facility patients to private facilities and vice-versa | Refer patients from public facilities to private facilities where they gain from exorbitant charges;29 Use equipment in public facilities to treat private patients.36 | Health workers’ poor pay;31 Political protection of doctors.37 |

Consensus development exercise

The findings from the literature review were presented to participants as described above. As noted, it had identified a variety of corrupt practices, including absenteeism, demand for informal payments, theft and diversion of drugs and medical supplies, procurement irregularities, diversion of public hospital patients to private clinics, and use of public health facilities for private practice. In subsequent discussion, participants added several practices that had not featured prominently in the literature, including document forgery, falsifying information for private gain, favouritism/nepotism in employment, promotions and deployment, undertaking treatments beyond the expertise or authorisation of the practitioner, deliberate underpayment of medical staff, job purchasing and corruption in training, prioritizing activities that are beneficial for workers, failure of accountability for unfinished projects, and infiltration/trading of counterfeit drugs. This discussion generated a list of 49 corrupt practices (Table 3).

Table 3: Corrupt practices generated from the round robin session

|  |  |  |  |
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| 1 | Unhealthy practices in employment of health workers  | 26 | Inappropriate exemptions of health services  |
| 2 | Unlawful receipt of money from patients  | 27 | Connivance with patients for personal gain  |
| 3 | Diversion of patients from public hospitals to private facilities  | 28 | Undue reimbursement or claims  |
| 4 | Impersonation of doctors by other health workers  | 29 | Playing politics with patients  |
| 5 | Inappropriate prescribing  | 30 | Hoarding of bed-space for personal patients  |
| 6 | Procurement of illegal drugs  | 31 | Overpricing drugs |
| 7 | Procurement of equipment that are not needed | 32 | Invoicing fraud |
| 8 | Favouritism/Nepotism  | 33 | Mal-distribution of health workers  |
| 9 | Bringing private patients into public hospitals and charging them as private patients  | 34 | Delay in reporting data as required  |
| 10 | Negligence of patients | 35 | Increasing hospital bills without commensurate services  |
| 11 | Diversion of medical supplies to private facilities  | 36 | Stealing or exchanging babies for fee  |
| 12 | Use of proxy patients  | 37 | Giving and taking kickbacks  |
| 13 | Requesting for payments for free services  | 38 | Falsification of data  |
| 14 | Protecting members of professional bodies even when they have committed crimes | 39 | Refusal to attend to patients based on financial constraints  |
| 15 | provision of fake documentation  | 40 | Refusal to stepdown acquired knowledge  |
| 16 | Over-budgeting  | 41 | Not following procurement procedures to get supplies  |
| 17 | Giving and taking kickbacks  | 42 | Poor attitude of health workers  |
| 18 | Lateness to work/absenteeism  | 43 | Late arrival to work  |
| 19 | Dual appointments  | 44 | Deliberate late release of funds  |
| 20 | Use of hospital vehicles for private businesses  | 45 | Poor leadership  |
| 21 | Falsification of results for private gain  | 46 | Theft of consumables  |
| 22 | Printing of fake receipts  | 47 | Delay in payments of health workers  |
| 23 | Procurement of fake drugs  | 48 | Sell of substandard medicines  |
| 24 | Ghost workers  | 49 | Lack of funding and no proper accounting systems  |
| 25 | Sales of personal consumables in public facilities  |  |  |

The 49-item list was discussed among participants and facilitators and condensed into 19 corrupt/illicit practices by merging or removing duplicates and overlaps. Participants then ranked them in terms of which were most important, in terms of significance and harm, followed by feasibility of addressing them. The top five corrupt practices that emerged (with their weighted scores) were: absenteeism (53), procurement-related corruption (34), under-the-counter payments (33), health financing-related corruption (28), and employment-related corruption (26).

Table 4: Results from NGT voting exercise with frontline health workers

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| --- | --- | --- |
| Condensed list of 19 corrupt practices (2nd listed) | First ranking - based on significance and harm  |  Re-ranking – based on feasibility to address |
| Top five corrupt practices (weighted scores) | Top five corrupt practices (weighted scores) |
| 1. Employment related corruption
 | 1. Absenteeism (53) | 1. Absenteeism (82)  |
| 1. Under the table payments
 | 2. Procurement-related corruption (34) | 2. Under-the-table/informal payments (71) |
| 1. Diversion of patients from public hospitals to private facilities
 | 3. Under-the-table/informal payments (33) | 3. Employment related corruption (59) |
| 1. Procurement of illegal drugs
 | 4. Health financing-related corruption (28) | 4. Health financing corruption at facility level (54) |
| 1. Procurement related corruption
 | 5. Employment-related corruption (26) | 5. Procurement related corruption (42) |
| 1. Bringing private patients into public hospitals and charging them as private patients
 |  |  |
| 1. Negligence of patients
 |  |  |
| 1. Diversion of medical supplies to private facilities
 |  |  |
| 1. Use of proxy patients
 |  |  |
| 1. Requesting for payments for free services
 |  |  |
| 1. Protecting members of professional bodies even when they have committed crimes
 |  |  |
| 1. Over-budgeting
 |  |  |
| 1. Giving and taking kickbacks
 |  |  |
| 1. Absenteeism
 |  |  |
| 1. Dual appointments
 |  |  |
| 1. Provision of fake documentation
 |  |  |
| 1. Procurement of equipment that are not needed
 |  |  |
| 1. Health financing at facility level
 |  |  |
| 1. Lateness to work
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After reflection and discussion of the ranked items, participants re-ranked the items. Table 4 shows the results of each round of ranking. In the second ranking, absenteeism (82) ranked highest. This was followed by under-the-table/informal payments (71); employment related corruption (59); health financing at facility level (54), and procurement related corruption (42). There were some shifts between the two times that participants ranked the types of corruption. Thus, while informal payments were considered less feasible to address in the first round of ranking, discussions highlighted strategies that may offer potential (with the rank moving from 3 to 2). Similarly, employment-related corruption was not initially seen as tractable given the need for a fundamental institutional change in regulations and enforcement mechanisms but, after debate, participants reconsidered this (moving from 5th to 3rd). Conversely, procurement-related corruption was de-prioritised when the strength of opposition from vested interests (powerful groups and actors) was discussed.

Stakeholder workshop

The senior managers and policy makers concurred with all the findings from the NGT but highlighted their real-life drivers and significance, and suggested some actionable steps to implement them, related to horizontal and vertical approaches listed in Table 5. Details of findings from group discussions (3 in total, one for each of the main areas) are presented below.

Group A – Absenteeism and under-the-table payment

Absenteeism was conceptualized broadly as being absent from the workplace, arriving late, and leaving before closing time. There was some debate about whether consciously not performing or refusing to perform tasks/duties when in the workplace was a form of absenteeism, with group members taking differing views. Participants agreed that it was widespread across the health sector but most prevalent within primary care and among more senior health workers – who were more often absent than the junior ones. Similarly, under-the-table-payments were considered a problem at all levels of healthcare but most prevalent in secondary and primary levels of care. The practices involved included extra-billing of clients or unauthorized (‘illegal’) payments made at a range of service points in a health facility and the ‘parallel sale’ of drugs and other consumables to clients.

Participants argued that weak governance, lack of supervision, poor attitude (often driven by the stresses of working in the system) and poor remuneration within the health system drove health workers to seek money in other ways, including absenteeism and under-the-table payments. Other drivers of absenteeism in primary care include underutilization of (low demand for) primary health centres for health services. However, health facility administrators and some other influential workers were considered to benefit from this type of corruption so it might be very difficult to facilitate change through measures that relied on their involvement. In these situations, stakeholders considered that top down or vertical interventions by the government, in the form of legislation and enforcement of rules would be necessary.

Absenteeism was also facilitated by structural problems, such as poor transportation and the long distances that health workers often have to travel to work. Female health workers often had competing family responsibilities. Senior doctors (consultants in particular), regardless of gender, had high social status that led to expectations that they would provide financial support to relatives beyond what was possible on their official income, leading them to seek additional income streams (dual practice) that required absence from facilities.

Stakeholders identified some technical remedies such as; clock-in/clock-out systems, linked to sanctions and rewards. Rewards might include cash incentives, display of pictures of especially committed staff, and greater flexibility in permitting authorised absences when needed. Structural interventions included improving the provision of accommodation and transportation for health workers and providing better equipment in health facilities, which would have direct benefits for patients beyond any impact on staff satisfaction. Views on public-private partnerships, such as those that would permit health workers to operate in both sectors in the same facilities, differed. Some saw this as a way to retain them in the facilities while others were concerned that it would create complex arrangements that would be prone to exploitation and abuse, thereby increasing corruption. As the participants discussed the feasibility of introducing these interventions, many, questions were raised but not answered about what changes would be needed in funding, policies, and legislation. Participants found it difficult to see how they would be able to convince authorities to make any changes, given the potential opposition they would face for uncertain personal or political benefit.

Discussions about under-the-table payments included several bottom up approaches. Increasing patient involvement could, it was thought, empower them by virtue of improved knowledge and strengthening the voice of service users, especially in relation to official prices of medical consumables and services. Stakeholders also proposed increasing choice, allowing patients to switch consultants and health care teams when irregularities occur. It was also suggested that costing and dispensing of consumables be decentralised, with trusted and reliable reporting platforms being established.

Reducing under-the-table-payments was also identified by the group as an important step in increasing revenue in health facilities, creating an incentive for health centre management teams to stamp this out. Again, however, the group thought that top down mechanisms would be necessary and would include audits, new legislation to support transparency in costing and dispensing consumables, protection for whistleblowing, and stiff sanctions for defaulters. Given the financial benefit that these could create for the health system, the participants considered that these would be more likely to gain buy-in from senior members of the government (in comparison to the suggestions around absenteeism).

Group B – Procurement-related corrupt practices

The second group discussed procurement-related corruption, much of which related to the distribution and theft of pharmaceuticals. A range of actors was identified as involved, including sales representatives, doctors, auditors and pharmacists. It was believed that these activities required a network of complicit actors.

Participants contended that curbing this form of corruption required that the procurement system be fully digitalized with effective recording, monitoring and feedback systems. They also suggested that improving clients’ awareness of essential medicines list and prices, as well as institutionalizing sanctions against offenders. Other potential anticorruption measures include: promoting a drug-revolving fund system, improving the tendering process by having multiple simultaneous submission and using limited access tendering boxes. The introduction of ICT for proper data management and monitoring the flow of supplies was also considered necessary to check for procurement corruption. Measures that would encourage institutions to adhere to procurement rules and whistleblowing policies were also identified as important. However, participants all agreed that most measures would require new legislation, imposing a vertical approach. Some horizontal measures considered feasible include measures to help patients understand pricing systems and creation of facility based committees to oversee procurement, usage, and supply of medical consumables. Such committees should have representation by patients and involve staff, especially those with high moral standards and self-discipline. Nevertheless, the suggested horizontal measures all would require enabling vertical ones, especially legislation, to operate. This was considered challenging.

Group C – Corrupt practices related to employment and health financing

The third group discussed employment- and health financing-related corrupt practices. Examples include: malpractice perpetuated by health maintenance organizations (HMOs) and service providers within the NHIS such as irregular reimbursement of fee-for-service by HMOs; billing HMOs/NHIS for services not provided to clients; extra-billing of insured clients; lack of update of enrolee lists by HMOs; and hoarding of drugs and false reporting of stock-outs of NHIS drugs in health facilities. Others mentioned included issuing fake receipts to clients and failure to release budgeted funds to health facilities. These practices, considered as involving very powerful groups and persons, were also said to be driven mainly by weak governance and regulatory oversight of NHIS, poor/unpredictable budgets for the health sector, and poor planning and prioritization.

Suggested strategies for curbing employment-related corruption mostly involved regulatory measures enacted and enforced by high-level authorities. Thus, vacancies should be advertised and the best applicants selected, rather than as is often the case using patronage; conducting staff audits using benchmarks for competence; deploying health workers appropriately; and ensuring a sustainable supply, with younger health workers being mentored and rising through ranks on the basis of their expertise. These measures were seen as creating a merit-based system that outlives the immediate future. Such an approach should curb irregularities as incompetent workers would become frustrated with the system, creating a deterrent for unqualified persons yet to be employed.

The only horizontal measures, involving different institutions and actors, and civil society groups, were empowerment of communities to demand deployment of health workers that have the skills required to meet their health needs. Proposals to tackle corruption in health financing were dominated by suggestions to improve efficiency of the NHIS through better regulation of HMOs, accreditation and improved oversight of service providers, annual updates of enrolee lists, and strengthening accountability of service providers to enrolees. Suggested approaches include: detailing of services provided to clients on an invoice which must be signed by the client before forwarding to HMOs for reimbursement; establishment of effective channels for client complaints and feedback to NHIS; and public display of pricing list of services.

In summary, excluding employment related corruption, the most promising anti-corruption strategies are those that could be implemented using both top down and horizontal approaches (at the grassroots level) and involve collective agreements and actions by key actors influential at the service delivery level. While there was perception that initiatives by grassroots organisations or movements can play a major role, if they are to rise to the challenge of tackling corruption they will have to be strengthened. It is thus important for civil society organisations, non-governmental organisations, and other bodies with a stake in combatting corruption to encourage and lead grassroots efforts to undertake these strategies.

**Discussion**

Corruption in the Nigerian health system is commonplace and a serious issue but, too often, is placed in the “too difficult” tray and the evidence on its scale and nature and on responses that have been adopted is often fragmentary. We have shown that it is possible to reach agreement among frontline health workers and policy makers about things that can be done. Our approach was participative, listening to those who have first-hand experience of this phenomenon. With them, we were able to develop a list of five priorities for action. These are: (1) absenteeism; (2) under-the-table/informal payments; (3) employment-related corruption; (4) health financing corruption and (5) procurement-related corruption. These were broadly consistent with what we had found in the literature.12,33,8,36,27,38,39 Evidence of procurement-related corruption and health financing corruption driven by political forces and top health managers have been reported in Nigeria.12,33 Absenteeism of health workers has also been reported in several parts of the country, with sickness and poor social and physical environment identified as underlying factors.40,41 Also, in monitoring malaria treatment expenditures, there is also evidence of informal payments in Nigeria.27

However, we needed to go beyond simply creating a list of problems. We needed to find agreement on both their importance and the feasibility of tackling them, a process that stimulated much discussion and took account of Nigeria’s political and economic context. Our explicit consideration of feasibility goes beyond most previous studies,13,7,15,16,110 as does asking senior healthcare managers and policy makers to validate the results from the NGT and propose viable responses.

It is important to notice that the top-ranked types of corruption, and the actors identified reveal health sector corruption that may appear to counter popular expectations/opinions such as grand embezzlements and pilfering of public funds often noticed/suspected among high ranking government officials. Though our approach to identifying corruption contributes to the focus of the participants, our findings highlight *everyday* corruption with regular frontline health workers (e.g doctors, nurses, pharmacists) as actors, with serious consequences for the delivery of healthcare. More importantly health workers believed that the solution to these forms of corruption can be feasibly implemented at the grassroot level. Hence, there is promise of avoiding the bureaucratic challenges associated top-down anti-corruption strategies. We do not claim that large scale embezzlement does not happen, or that it does not have significant impact on health outcomes, but frontline health workers as well as policy makers realize that such types of corruption are beyond their influence.

Our study has several limitations. First, it was not feasible to include health workers from all regions of Nigeria. With only 50 participants (including health workers and policy makers), we may not have captured the entire spectrum of corruption prevalent in Nigeria and we may have given undue prominence to corrupt practices dominant in the places from which participants were drawn. Future studies could replicate this study in other regions of the country to see if similar or more diverse forms of corruption will be identified. Our study was exploratory and was unable to examine in-depth the specific forms of corruption identified. Further research using qualitative methods such as in-depth interviews and focus group discussions would help to understand in more depth the drivers of various forms of corruption and their dynamics.

However, this is the first study in the region to employ structured consensus building to prioritise action on forms of corruption, taking account of what is feasible. It was not obvious that this would have been possible at the outset given the sensitivities involved. In this way it offers a means by which researchers and policy makers in other LMICs can begin the process of tackling corruption. It is important to stress the contribution of engaging in a process of consensus building. It would have been possible to derive the final list of priorities simply from the literature. However, by engaging in discussion, participants changed their views about what was possible, identifying and supporting potential measures they would once have discounted. The approach we took also enabled those at the frontline and those at the apex of the system to engage with one another in a constructive manner that otherwise does not occur.

Our experience provides support for targeted, pragmatic approaches to governance and anti-corruption in health systems policy. Such approaches are gaining ground in other sectors (education and industrial policy) where, under the rubric of developmental governance,42 or cumulative incrementalism,43 actors are seeking ways to intervene “within the grain”,44 that is by taking account of the ways in which the economic, political and social structures limit the potential for action. Such approaches recognise that the long-standing search for comprehensive solutions to corruption in society, or more narrowly in the health sector, has not, in general, proven fruitful. In health, the enormity of the task, the multiplicity of actors involved, and the limited institutional capacity for reform have led to corruption being seen as impossible to tackle at the current stage of development. Politicians in many countries have entered government with a stated intention to do something about it but failed. This was borne out in our discussions with key stakeholders. There was widespread agreement about the need for stronger systems of governance, accountability, and transparency, but the practical steps that needed to be taken remained elusive. In contrast, by focusing on specific manifestations of corruption, those who participated in this exercise were able to identify a number of measures that did seem feasible and offered potential for success. In a number of cases, individuals who began the process with a degree of scepticism about what could be achieved changed their minds.

Obviously, the ideas coming from this exercise now need to be further operationalised to concrete policies and interventions and evaluated, not least because of the risk of unintended consequences. Thus, while some measures seen relatively straightforward, even if requiring additional resources, such as arrangements for more flexible working and improved accommodation and transport for health workers, others, such as the introduction of sanctions and rewards for dealing with absenteeism, will need to be carefully designed and evaluated to ensure that they are achieving their intended goals.

Some of the measures proposed lie within the scope of district authorities, who have the power to implement them. A number involve relatively simple changes, such as improved documentation of financial flows. However, others require action at a higher level. Participants supported managers and policy makers working concert to promote appropriate legislation.45 Jackson and Köbis suggest that a multipronged approach that will counter both vertical and horizontal pressures to be corrupt and also mobilize local action will be more effective in fighting corruption within communities and organisations.46 For instance, effective feedback mechanisms (such as phone-in centres or hotlines) for patients to report informal/under-the-table payments would require supportive ‘formal’ health financing or consumer protection policies. Similarly, whistleblowing would only produce results if policy and political environments enable enforcement of sanctions.

The identification of practical measures that can be taken should not, however, divert attention from the larger issues underpinning the persistence of corruption, including inadequate resources for the health sector.47,12,48,31 Inadequate government funding leads to low wages for health workers, poor infrastructure and basic amenities, and lack of equipment and consumables in health facilities, all creating the conditions for corrupt practices. Onwujekwe et al found that health workers who demanded informal payments from clients for treatment of malaria, which was supposed to be free, did so to augment their salaries and generate internal revenue to keep the facility running.27 In addition to low wages, health workers in the public sector lack materials (including medicines) and equipment to deliver quality health care.48,36 Some health workers are expected to work in health facilities for several years as unpaid volunteers.49 Addressing these issues will require structural changes and better resourcing of the health system which need to be addressed over a longer time period.

Despite the lack of evidence on the effect of transparency and accountability initiatives on corruption, there is some evidence that horizontal approaches involving communities monitoring and participating in decision-making has led to improvements in local governance and health outcomes.50 There is a clear need to empower patients. One explanation for the persistence of informal payments, developed by Gaal and McKee (2004),51 is that they represent a means of informal exit (INXIT), in settings where patients lack both exit (to alternative services) and voice (redress). Hoffman and Patel show how a failure by patients to question medical staff who accept corrupt practices encourages corruption in the health sector.5 However, this will require considerable efforts to strengthen civil society groups and create a political space where the voice of multiple actors can be heard.

In summary, although only a first step, this exercise presented in the paper has shown that it is possible to bring together people from across the health sector in Nigeria to discuss corruption, and to conclude that some solutions are possible, even if it will take some time to fix the underlying problems. We hope to further this research by expanding detailed understanding about the drivers of the corrupt practices identified as well as explore the practicability and effectiveness of the solutions suggested by policy makers. We invite other researchers to explore similar directions.

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