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Corruption in global health: the open secret

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Corruption is embedded in health systems. Throughout my life—as a researcher, public health worker, and a Minister of Health—I have been able to see entrenched dishonesty and fraud. But despite being one of the most important barriers to implementing universal health coverage around the world, corruption is rarely openly discussed. In this Lecture, I outline the magnitude of the problem of corruption, how it started, and what is happening now. I also outline people's fears around the topic, what is needed to address corruption, and the responsibilities of the academic and research communities in all countries, irrespective of their level of economic development. Policy makers, researchers, and funders need to think about corruption as an important area of research in the same way we think about diseases. If we are really aiming to achieve the Sustainable Development Goals and ensure healthy lives for all, corruption in global health must no longer be an open secret.

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Introduction

I have heard so many people around the globe saying that we live in an extraordinary time in the history of public health, and I kind of agree. Each day, more technology to fight diseases and improve lives is made available, and we are continuously doing numerous sophisticated randomised trials to test whether an intervention or a new drug works. This is indeed a key moment in history. However, all of these incredible breakthroughs will mean little if they do not work in the real world and we cannot reach all people. We talk about careful planning, implementation, commitment, and leadership to make things work in health systems, but we do not talk about the main challenge we are facing in global health—corruption.[1,2]

Here, I would like to clarify that I use the term global health to refer to the health of populations in the global context, not to refer—as many do (wrongly I think)—to investments by organisations, foundations, and high-income countries in efforts to address health and development challenges in less economically developed countries, usually in the southern hemisphere.

I would like to advocate for the need for researchers and academicians from the global community to develop and test new models that could work to fight against corruption in global health, and to funders to support this effort. This task is urgent; corruption is the biggest threat for the future of health globally.

My main disclosure is that I am not at all an expert on the topic, except that as someone from a middle-income country in Latin America, I have lived my entire life surrounded by corruption, which was viewed by many as the status quo or even as a coping mechanism. I have heard people within my country and colleagues from the north (by which I am referring to higher-income countries in the northern hemisphere) use terms such as survival corruption, to try to justify unjustifiable situations. As a medical student, 30 years ago, I saw corruption related to providers' practices, supplies, drugs, and more, but because resources were scarce at that time, there was not too much to steal. However, when I became the Peruvian Minister of Health in 2016, I realised the magnitude of the problem, especially because there are now more resources than ever. With more money, there is more corruption. The availability of foreign aid for health also fuelled corruption globally. I have seen how, in order to move a strategy on or complete an implementation, it was viewed as acceptable, although sometimes odd (in the words of funders), to pay extra for activities that were part of providers' jobs or to simply overlook things that were uncomfortable.[3] One example is paying health-care providers to attend training sessions—isn't training part of their jobs and an incentive? Well, it used to be in my country, but for several global health programmes, paying health workers to attend a training session became a practice and created an unsustainable corrupt circle. This practice led to a situation in which health workers participating in training were not those who needed the training, but those who were chosen to receive the incentive. For global health experts who argue that it is important to identify whether corruption is or is not an obstacle to the success or implementation of a global health programme,[4,5] I will argue that corruption is always a problem, even if the programme looks like a success. Corruption is a substantial cost-related driver that affects a programme's sustainability and effectiveness and the possibility of a country's graduation from aid or mother support.

This situation is the reality today. Now that we have more resources than ever globally, the whole world is erupting in corruption, but we are not talking about or confronting the issue. Corruption is an open secret known around the world that is systemic and spreading.[6] Over two-thirds of countries are considered endemically corrupt according to Transparency International.[7] Although the perception of corruption in the health sector varies across countries, overall the sector is viewed very negatively.[8] Corruption affects the poor and most

vulnerable, and corruption in the health sector is more dangerous than in any other sector because it is literally deadly.[9,10] Corruption violates the rights of individuals and communities.[11] When corruption relates to health, health systems, individuals, and health outcomes are deeply affected.[12] It is estimated that, each year, corruption takes the lives of at least 140000 children,[13] worsens antimicrobial resistance, and undermines all of our efforts to control communicable and non-communicable diseases.[14,15] Corruption is an ignored pandemic.[16]

How corruption started and spread

Although there is no one comprehensive, universally agreed definition of corruption, corruption is clearly "the abuse of entrusted power for private gain".[17] Corruption presents in a range of ways, from the subtle to the very grandiose. Corruption has existed for a long time, probably as long as there have been human social structures.[18] Some theories suggest that in the development of social structures, there are clear differences in what happened with nations in the north compared with the south, which could explain the endemicity and higher amounts of corruption in the latter. Governments in the north were created to serve citizens whereas in the south, colonies were structured to exploit resources and populations. Later on, when colonised nations became independent, the social structures maintaining these colonial practices continued to benefit the new individuals in power.[18–20]

In the past 30–40 years, corruption has really erupted, and since the early 1990s it has received more attention.[21] Some explanations about the spread and growth of corruption link to the profound changes after World War 2 and with the Cold War.[6,21] After World War 2 and after a very short period of reconstruction, the European countries that had occupied much of the world essentially de-occupied those territories, leading to the emergence of new countries. A similar phenomenon happened at the very end of the 1980s and the beginning of the 1990s, with the end of the Cold War. The new countries that were created after the breakup of the Soviet Union had institutions that were inexperienced and that were staffed with people who lacked sufficient knowledge or experience. These institutions were weak and vulnerable to exploitation, abuse, misuse, and corruption.[22] Parallel to this, global markets started to expand to a broader range of commercial and trade relationships. Although North American and European businesses did not have experience working in other parts of the world, they sought expedited and convenient ways of interacting with these new places, which unfortunately were greasing the wheels for corruption. Such practices spread like a virus, leading to corruption as a way to facilitate interactions. In countries with authoritarian regimes, in which regular people had very little power, corruption found a space to bloom.[23] In our global world, we have to recognise the role of developed countries as the supply side of the corruption equation in developing countries. We also have to recognise the existence of corrupted and corruptors, and the need to work together in the quest for a solution for this global problem.[24]

Corruption in the health sector

The health sector is an attractive sector for corruption.[25] Corruption can be seen in all societies. However, because it is influenced by organisational factors, the extent of corruption seen in any sector, including health, relates to the society in which it operates. In societies with less adherence to the rule of law, less transparency, and less accountability mechanisms, health systems are more corrupt.[26]

Corruption threatens any efforts to reform the public sector and to reach universal health coverage, which also affects efforts to achieve the UN's Sustainable Development Goal 3.[27–30] Corruption limits access to health services and debilitates all dimensions that determine good health systems performance: equity, quality, responsiveness, efficiency, and resiliency, and also affects outcomes and lives.[15,29,31] Corruption also causes demotivation and burnout of human resources. It is the "cancer of our health systems."[4]

It is estimated that the world spends more than US$7 trillion on health services, and that at least 10–25% of global spending is lost directly through corruption, representing hundreds of billions of dollars lost each year.[15,25,32,33] These billions lost to corruption exceed WHO's estimations of the amount needed annually to fill the gap in assuring universal health coverage globally by 2030.[34,35] However, the true cost of corruption for people is impossible to quantify because it can mean the difference between wellness and illness, and life and death.

Corruption is embedded and systemic in the health sector. Klitgaard and colleagues[36] highlight that the amount of corruption depends on three variables: monopoly (M) on the supply of a good or service, the discretion (D) enjoyed by suppliers, and the supplier's accountability (A) to others. The authors show that the amount of corruption (C) could be expressed as: C=M+D−A.

This equation shows that the more concentrated a supply of a good or service is, the higher the discretionary power of those that control the supply is, and the lower their accountability to others is; therefore the amount of corruption will be higher. Unfortunately, these are the characteristics of health systems. The complexity of the system, high public spending, market uncertainty, information asymmetry, and the presence of many actors (ie, regulators, payers, providers, consumers, and suppliers) interact at different levels, increasing susceptibility to corruption.[29,37] Moreover, global healthcare expenditures are on the rise due to growing ageing populations, chronic and more complex diseases, pressure to acquire high-tech and costly equipment, and an increasing number of expensive drugs pushed by powerful transnational vendors in an interconnected

world, all of which cause social pressure for governments and attract more corruption.[33] Additionally, issues such as a lack of good record keeping and inefficiency make it more complicated to differentiate corruption from honest mistakes.

Types of corruption in health

Corruption in health can range from petty corruption to high-level national, or even multinational, corruption.[10] It presents in different ways, such as bribery, extortion, theft, embezzlement, nepotism, and undue influence.[38] It appears at different points in the system: in the provision of services by medical personnel and other health workers, in the purchase, distribution, and use of equipment drugs and supplies, in regulation of the quality of products and services, in the hiring of human resources, and in the construction of facilities.[37] Transparency International recently discussed the six most common types of corruption in service delivery.[15] The first is absenteeism. Leaving aside legitimate causes such as illness, absenteeism is when employees do not show up to work. In the case of health services in low-income and middle-income countries, this is often because they are engaging in private practice during their regular public service working hours. Labour unions in several low-income and middle-income countries support this informal situation. Absenteeism is associated with the lack of accountability and penalties and, not only demotivates good workers, but also leaves patients without the care needed.[39–43] Unfortunately, although absenteeism is a common problem (believed to affect 34–50% of employees globally,[15] it has not been well studied.

The second form of corruption is informal payments from patients, which include a range of situations and amounts that represent bribes in most cases.[44–46] The third form of corruption is embezzlement and theft of money, supplies, and medications. Embezzlement is one of the most clear-cut forms of corruption. The fourth form of corruption is corruption in service provision, which includes actions (eg, treatments, procedures, and referrals) not driven by medical considerations alone and can be either over-provision or under-provision of these actions. Corruption in service provision happens worldwide in the public and private sectors, inflating the costs of services, and placing patients at risk. An example is the excess of caesarean sections in Latin American and other countries.[47,48] According to Naím,[21] "conflict of interest underlies all acts of corruption." One example in Peru is the conflict between health professionals, such as the refusal of physicians to allow trained professional midwives to do particular procedures (eg, colposcopy or cryotherapy), alleging that it would intrude on their specialty. Peru has an important gap in health resources, especially with regard to physicians,[49] and one challenge with high rates of cervical cancer with high mortality is how to reach women and treat them. The reality is that the core of the problem is the fear of losing clients and money, so task shifting and task sharing is not acceptable for such physicians, causing under-provision of services.[50]

The fifth form of corruption is favouritism, meaning that care is given preferentially to people who are recommended or have social connections, thereby affecting the care that other patients receive. The sixth form of corruption is manipulation of data, which Transparency International refers to as the billing for goods and services that were never sent or done because compensation is given according to the number of people treated.[15,51] However, I would like to broaden this concept to include the manipulation of data reported—for example, coverage of public health activities such as vaccination. The manipulation of data is an issue that was recently raised in Mexico.[52] We have also seen data being manipulated in Peru in the case of maternal syphilis screening. Providers disclosed that they repeatedly overestimated data for particular programmes because of fear of receiving less supplies, to assure that they received productivity incentives, and to not be identified as lazy. When this happens, data are not reliable and public health is affected.

From my personal point of view, individual acts of corruption at the level of the day-to-day interactions of patients with health services and providers can look small in scale, but they represent millions of negative interactions and have an enormous and damaging effect on our efforts to improve health. They are also more difficult to address than corruption occurring at a higher level. Additionally, these acts become normalised in society and are considered to be just the way things work. It is common to see any of the following forms of day-to-day corruption: a delay or denial of health services, supplies and medications being sucked from the public sector to feed the private sector, staff charging patients more than official prices and pocketing the difference, collusion between hospital staff and external pharmacies or external providers of medical tests, high absenteeism by doctors with a second job in the private sector, doctors referring patients to their private practice, and deliberate damage of equipment in the public sector to force people to pay for private services (which, by the way, are typically located adjacent to public health facilities and are owned and staffed by the same public providers who provide service in the public and private arenas).

In Peru, I was once shown a paper clip inside an x-ray machine. The paper clip was used to damage the equipment in a public health centre, forcing patients to pay for an x-ray in the private clinic in front of the health centre. Deliberate damage also happens with laboratory equipment, with diversion of medications from the public sector being one of the worse problems. The government purchases medications to be given for free to people with national insurance, but the medications are denied to the patients at the public health centres because the drugs apparently disappear. The Ministry of Health started an investigation and found an illegal operation that removed

the drugs from storage and public hospital pharmacies and placed them in private pharmacies. Individuals called *jaladores* (pullers) were conveniently placed outside the hospital pharmacies and offered to take patients where they could buy medications at a so-called reasonable price. The operation was much more complex than I am able to describe here and involved important actors. Unfortunately, the investigation could not be completed during my time as Minister of Health (a period of 14 months) and the situation continues, causing the country millions of soles in losses.

During my time as Minister of Health, corruption was one of my biggest challenges. I had to handle and overcome the uncovering of fraud in the comprehensive health insurance programme by an individual who was the president's advisor. This event allowed us to confront the fragility of the system and, along with all of the corruption I observed in the health sector, pushed me to explore what was known to work against corruption and what could be done to prevent corruption from happening.

Corruption control

Corruption has been overlooked or ignored because it is not always clearly defined and has been seen as a way to make dysfunctional systems work. There is a consensus that to be effective against corruption, actions should be informed by theory, guided by evidence, and adapted to the context.[37] There are two main groups of theories with respect to the control of general corruption: those advocating the need to create strong institutions, and those focused on the way people think. The institutional theories are best described by the work of Transparency International,[53] who introduced the concept of the National Integrity System assessment, based on a holistic approach for preventing corruption, by looking at the entire range of relevant institutions and their relationships. Transparency International theorise that if institutions were strong, people wouldn't even be tempted to participate in corruption. The second group of theories, those concerning the way that people think, focus on the way people process rule breaking or an individual's decision to engage in corruption.[54] This process can be represented by the following equation: $B_p > C_{psy} + pp\,(C_{crim} + C_{soc}) + C_{fav}$. In this equation, B_p represents the perceived benefit of an act of corruption, C_{psy} the psychological costs, pp the perceived probability, C_{crim} the criminal costs, C_{soc} the social costs to the individual, and C_{fav} the costs of doing the corrupt act.

From this equation, a corrupt act is more likely to happen if the perceived benefit (B_p) is higher than the sum of the psychological costs (or how the person will feel, which has to do with their personal values), the perceived probability of the criminal costs and social costs to the individual (which has to do with social norms), and the costs of doing the corrupt act (how easy or difficult it would be). This theory highlights the importance of social norms. Experts agree that the two theories converge because social norms are assured through institutions. The challenge is how can strong institutions be created, and how can social norms be changed, to fight corruption?

In the past 10 years, international and national efforts to combat general corruption have gained attention.[55,56] Good governance is a crucial factor for a well functioning health system and for better health outcomes.[57,58] However, solutions against corruption in the health sector need to be sought, even in the absence of strong health systems, political will, or systemic reforms. Although it might be difficult, it is imperative to address corruption in global health.

Some experts suggest that there are three key factors that increase opportunities to engage in corrupt practices in health: first, being in a position of power—the relative position of a health worker versus a patient—in a system with inadequate oversight provides an opportunity to abuse; second, financial, peer, or personal pressures; and, third, a culture that accepts corruption.[37] Addressing these issues could be a way of approaching anti-corruption measures. Strengthening accountability, improving data, improving supervision, improving salaries, providing incentives to reward good performance and sanctions for poor performance, increasing transparency (active disclosure of how decisions are made and performance measures), and providing a platform for citizen voice and law enforcement (detection and enforcement) are all measures that have been suggested.[10,15]

As an academician and a researcher, I decided to look for evidence on what works to fight corruption in the health sector and started by exploring the term "corruption" in PubMed. I was shocked with the scarcity of publications. I compared it against the terms "breast implants" and "HIV". For 2018, I found only 122 articles related to corruption compared with 478 for breast implants and 14 718 for HIV.

Most of the articles I found related to a description of corruption and an analysis of the problem, explored cases and situations, and provided specific recommendations that were based on theories. However, I did find a systematic review from 2012 and a Cochrane library systematic review from 2016, both of which showed an absence of evidence on what works to reduce corruption in the health sector.[59,60]

Research in anti-corruption measures in global health in the real world

Success in tackling corruption is possible even though it can be difficult at the start. Understanding what works and how to overcome implementation challenges are important starting points. There are so many suggestions for strategies to confront corruption, including the following: enhancing financial management, managing conflicts of interest, improving policies and processes for

investigations and the penalisation of corrupt acts, community involvement (power of the people), using technology platforms for active surveillance, crowdsourcing information, the use of big data, and use of data mining and pattern recognition to identify fraud or abuse profiles. However, evidence for the effectiveness of these suggestions is still scarce.[61–65] Whether improving health information systems could help the fight against corruption needs to be studied. Countries that have already been working in this area can help us to better use data. In Peru, in 2017, the Ministry of Health started using electronic health records to provide an opportunity to use data to help uphold accountability. However, there are no plans on how to use the data to prevent or detect corruption situations.

The introduction of technologies for authentication or verification of products to prevent diversion of medications or fake medications should also be tested and their cost-effectiveness measured.[4] How should social norms be addressed? How can our professional education programmes be improved? How can the health-care system break the asymmetry of information and abuse? Is it true that with better salaries we will stop corruption? What is a good salary? Is paying staff properly a prerequisite for reducing incentives to top up salaries? Moreover, how can corruption in health be measured more accurately? These are all questions we need to answer through well designed research that is focused on prevention of corruption in the health sector. There are already several authors who have highlighted open research questions that need to be addressed: we need to start working on them.[15,66]

We can start by designing and testing anti-corruption interventions for the health sector, for global health. We could start from the bottom up, taking small steps. We need rigorous research methods to prove or disprove that a strategy works. Addressing and ending corruption will require the participation of researchers from several disciplines and multiple approaches, and the commitment of funders to supporting serious research. Corruption in global health should not continue as an open secret, it has to be confronted and brought to light.

A substantial proportion of grant making focuses on the discovery and development of new health tools. Funding for research on interventions against corruption is still very scarce in the world. All countries, irrespective of their level of economic development, should be equally committed to helping ensure that in our world (and I want to strengthen our world, not the so-called global south and global north, which is an absurd division), corruption in health will be eliminated in the same way that we achieve commitments for the elimination of diseases. I am hopeful that in the coming years, if interventions are tested against corruption in the health sector soon, we will have effective anti-corruption models that could truly accelerate improvements in global health.

Declaration of interests
I declare no competing interests.

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