

THE IGNORED PANDENIC

How corruption in healthcare service delivery threatens Universal Health Coverage Transparency International (TI) is the world's leading non-governmental anti-corruption organisation, addressing corruption and corruption risk in its many forms through a network of more than 100 national chapters worldwide.

Transparency International Health Initiative (TI-HI) overall goal is to improve global health and healthcare outcomes for the benefit of all people, of all ages. It aims to achieve this by reducing corruption and promoting transparency, integrity and accountability within the pharmaceutical and healthcare sectors.

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THE IGNORED PANDEMIC:

How corruption in healthcare service delivery threatens Universal Health Coverage

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EXECUTIVE SUMMARY



Universal health coverage, meaning that all individuals and communities can access essential quality health services without suffering financial hardship, has become the top priority of the World Health Organisation. Achieving the ambitious goal of universal health coverage will require more resources, and the better use of existing resources.

At the same time, efforts to achieve universal health coverage are being significantly undermined by widespread corruption in frontline healthcare service delivery. Corruption in the health sector kills an estimated 140,000 children a year, fuels the global rise in antimicrobial resistance, and hinders the fight against HIV/ AIDS and other diseases. Unless the most harmful forms of corruption are curbed, universal health coverage is unlikely to be achieved.

Based on an extensive review of the literature, this report seeks to open a new page by taking a fresh look at the evidence on corruption and anti-corruption. It explores the drivers, prevalence, and impact of corruption at the service delivery level. In many countries, deep structural problems drive frontline healthcare workers to absent themselves from work, solicit gifts and extort bribes from patients, steal medicines, and abuse their positions of power in a variety of other ways, usually without facing any consequences.

The cumulative damage is staggering. Corruption significantly weakens overall health system performance, and has been found by multiple studies to have a significant negative impact on important health outcomes. Corruption in the sector causes losses of over US\$500 billion every year, more than it would cost to bring about worldwide universal health coverage.

Nonetheless, health policy makers have traditionally paid little attention to corruption, and many of the current approaches to anti-corruption in the sector lack effectiveness. Unless this changes, it will be practically impossible to achieve universal health coverage. Business as usual is no longer an option.

Decision-makers urgently need to move beyond the piecemeal and ad hoc anti-corruption measures of the past, and instead make curbing corruption an integral part of wider efforts to strengthen health systems, improve health outcomes, and achieve universal health coverage. While experience shows that tackling corruption in healthcare service delivery is difficult, it is not impossible.

Efforts to curb corruption can be successful if they focus on the most harmful forms of corruption, are based on a thorough understanding of high-level political constraints and ground-level health system operations, and follow a coherent agenda that is firmly embedded within wider health system strengthening efforts.

Nonetheless, there are no simple playbooks, no easy wins and no magic bullets. Successfully curbing corruption in healthcare service delivery requires in-depth research, thorough analysis, the skilful combination of multiple approaches, and a single-minded focus on improving health outcomes.

HOW CORRUPTION THREATENS UNIVERSAL HEALTH COVERAGE

"At least 400 million people have no access to basic health services, and 40% of the world's people lack social protection. Think about some of the human realities behind these numbers. About the young mother who dies in childbirth because she lacks access to health care. About the young child dropping out of school due to impoverishing health expenses."

Dr Tedros Adhanom Ghebreyesus (WHO 2017)

The World Health Organisation (WHO) has made ensuring universal health coverage (UHC) its top priority. UHC means that all individuals and communities can access essential quality health services without suffering financial hardship. Moving towards UHC will require strengthening health systems in all countries (WHO 2018c).

According to the WHO, achieving the health-related Sustainable Development Goal through UHC would avert 41 million child deaths, and increase average life expectancy worldwide by five years. To achieve Universal Health Coverage, additional investments into healthcare of up to US\$370 billion a year until 2030 are required. The vast majority of low- and middle-income countries will be able to provide most of these funds themselves, with international donor support required to cover the remaining financing gap of US\$17-35 billion a year (WHO 2017).

Eliminating corruption in healthcare could cover the cost of UHC

Globally, over 7% of healthcare expenditure is lost to corruption. With annual global health expenditures now exceeding US\$7.5 trillion, this suggests that far over US\$500 billion in health resources are lost to corruption worldwide every year. Thus, curbing corruption in the sector could free up enough resources to pay for universal health coverage worldwide.

Sources: Jones et al. 2011, WHO 2018b

Conversely, more money alone is unlikely to bring about UHC unless corruption in the sector is effectively tackled. Multiple studies have found that high levels of corruption are linked to weak health outcomes, and there is strong evidence to suggest that corruption significantly reduces the degree to which additional funding for the sector translates into improved health outcomes (Makuta et al. 2015, Muldoon et al. 2011, Olafsdottir et al. 2011, Ciccone et al. 2014, Witvliet et al. 2013).



Corruption kills 140,000 children every year

A 2011 study based on data from 178 countries estimated that more than 140,000 child deaths a year are attributable to corruption. The authors performed regressions on numerous variables and found that national corruption levels had a stronger impact on child mortality rates than literacy, access to clean water, or vaccination rates.

They warned that the 140,000 deaths are probably an underestimate, as corruption is also likely to undermine other factors contributing to child heath, especially the percentage of the population provided with adequate access to clean water and sanitation, and overall public health expenditure levels.

Source: Hanf et al. 2011

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Shining a light on this too-often neglected public health issue, this report focuses on corruption at the healthcare service delivery level, where patients directly interact with the health system and individual providers. While individual acts of corruption at this level are typically small in scale, cumulatively they have a huge impact and significantly undermine efforts to expand and improve access to vital health services.

In addition to causing individual suffering and death, corruption at the level of service delivery also has wider systemic impacts:

- Drug-resistant viral strains emerge and may spread throughout entire populations because patients cannot consistently access quality medicines due to drug thefts and resulting stock-outs.
- Children fall sick, cannot attend school and remain illiterate because rampant absenteeism among healthcare staff leaves them unable to access vaccines and treatments.
- Economic growth slows down because untreated minor ailments turn into major illnesses or chronic conditions, leaving people unable to work.
- Poverty is perpetuated because families are forced to sell assets or go into debt to pay bribes for services that should be free.
- Political stability and efforts to contain epidemics are undermined because citizens encountering corruption at their local clinic lose faith in the state's willingness and ability to provide basic services (Stephenson 2015, Demming 2017).

Antimicrobial resistance strongly linked to corruption

Antimicrobial resistance emerges when microorganisms causing disease become resistant to drugs, which then poses an increasingly serious threat to global public health, with growing resistance undermining efforts to combat major diseases such as HIV, malaria, and tuberculosis.

Antimicrobial resistance was long assumed to be driven mainly by the amounts of antibiotics being used. However, when a research team analysed data from 28 countries in Europe, it found that national corruption levels were as important in explaining cross-country variations in resistance levels as antibiotic usage was.

While the precise mechanisms linking corruption to antimicrobial resistance remain unclear, the researchers conclude that "[r]educing antimicrobial resistance requires a policy mix aimed at lowering antibiotic usage in people and, perhaps even more importantly, developing better controls on corruption."

Source: Collignon et al. 2015

Corruption thus significantly undermines efforts to achieve Sustainable Development Goal 3, which is to "ensure healthy lives and promote well-being for all at all ages".



How corruption undermines the fight against HIV/AIDS

A key target under Sustainable Development Goal 3 is to end the global epidemic of AIDS, but corruption is weakening the struggle against the disease.

A 2015 study comparing the volumes of overall imports of antiretroviral drugs to AIDS deaths at the national level found strong evidence that countries with higher levels of corruption experience a significantly smaller drop in AIDS deaths as a result of the same quantity of medicines imported. In other words, given the same quantity of medicines, AIDS deaths are reduced less in corrupt countries.

In particular, stock-outs (often due to drug thefts) and absenteeism cause interruptions in individual patients' treatment regimes. This not only shortens the lives of individual patients, but also raises the costs of health service provision, as stock outs and fears of stock outs can dramatically increase the quantity of drugs needed to treat the same number of people. In some cases, corrupt staff may even deliberately restrict access to medicines in order to create artificial scarcities that keep drug prices high.

Corruption also causes long-term systemic problems. In particular, treatment discontinuities create a "high risk" of the fast-mutating virus developing drug resistance, which will reduce the effectiveness of future medical treatment for patients with HIV.

The study warns that "The lack of reduction in mortality from the same expenditure on treatment in relatively more corrupt countries points to a very dangerous consequence of corruption."

Source: Friedman 2015

Corruption severely affects all five dimensions of health system performance: equity, quality, responsiveness, efficiency and resilience (WHO and World Bank 2017). More money spent on medicines will only cure more patients if it reaches those in need. More money spent on doctors will only benefit more patients if those doctors actually turn up for work. For these reasons, the WHO has identified good governance as a "critical element" of efforts to achieve UHC (WHO 2018c).

However, this report documents that many of the current approaches to anti-corruption in the sector lack effectiveness. Key reasons include a weak and disparate evidence base on corruption, failure to take into account local political realities, flawed programme designs, and a misguided focus on paper trails rather than on the impact that corruption and anti-corruption interventions have on health outcomes.

As this report shows, these problems can and must be overcome. Billions of dollars are on the table and the lives of 41 million children are at stake. Business as usual is not an option. Tackling corruption must become an integral part of efforts to strengthen health systems and achieve UHC.

TYPES OF CORRUPTION

This report focuses exclusively on corruption at the service delivery level, where patients directly interact with the health system and individual providers. While individual instances of corruption at the service delivery level are typically small in scale, their high frequency in many settings cause great cumulative damage. Collectively, they significantly undermine the accessibility, affordability and quality of healthcare, with often disastrous outcomes for individual patients, national health systems, and global health.

Corruption at higher levels is also a substantial problem, and several of the corruption types discussed below are in fact enabled, exacerbated, or at times even generated by higher-level corrupt dynamics. As this report repeatedly documents, instances of corruption at the service delivery level are often caused by deeper structural problems that are beyond the control of underpaid and overworked frontline service providers. However, discussing all types of corruption prevalent across the many levels of healthcare systems is not possible within a single report.

Keeping this caveat in mind, this section discusses six types of corruption frequently encountered at the service delivery level:

- Absenteeism
- Informal payments from patients
- Embezzlement and theft
- Service provision
- Favouritism
- Manipulation of outcome data

The following section will explore each corruption type in depth by providing a description of the corruption type, exploring its drivers through country-specific examples, giving an indication of its prevalence.

ABSENTEEISM

Description

Absenteeism constitutes corruption when public employees choose to engage in private pursuits during their working hours, either pursuing private business interests or enjoying unauthorised leisure time at public expense. Absenteeism can be categorised along two axes: voluntary versus involuntary, and planned versus unplanned (Belita et al. 2013). It can take two forms, missing entire days at work, or 'shaving off' hours of the working day (Lewis 2006). In most countries, ghost workers – staff who only exist on paper – seem only to account for a small percentage of overall absences (Chaudhury et al. 2006).

Globally, about 7% of healthcare workers are reported to experience at least one spell of absence each week (Kisakye et al. 2016). However, this includes involuntary or "non-culpable" absences from work, for example due to illness, that do not constitute corruption (Davey et al. 2009). Note that the difficult and often stressful working conditions of healthcare staff in low-income countries likely contributes to a higher baseline of involuntary absences than those documented in more resource-rich settings.

Drivers

Sickness and work-related stress are the leading causes of health workforce absenteeism in high-income countries, but the reasons for health workforce absenteeism in low-income and middle-income countries are less well researched (Belita et al. 2013, Tweheyo et al. 2017).

Low and unreliable pay for medical and support staff are frequently cited as the most important root causes, but not all developing countries have high absenteeism rates (Yamada et al. 2012). Furthermore, public employees in poorer regions of India are absent more often than their peers in richer regions despite their relatively higher incomes (Chaudhury et al. 2006), so low pay levels alone do not fully explain the phenomenon.

A pivotal enabling factor across many countries is public employees' lack of accountability. Many health systems do not effectively monitor attendance (Kisakye et al. 2016, Rahmani et al. 2013), and employees in many countries face little or no consequences for failing to turn up for work (Ackers et al. 2016, Lewis 2006, Zamboni et al. 2018), especially if they are politically connected (Friedman 2018). A third key factor is the ability of medical staff to use their skills to earn additional income through private practice. In some settings, over half of doctors have private practices in which they often 'moonlight' during official working hours (Iles 2019, see also Vian 2014). More broadly, domestic policy makers rarely focus on the issue (Chaudhury et al. 2006).

Other drivers of public health sector absenteeism are staff demotivation due to physically and psychologically bad working conditions (Chaudhury et al. 2006, Kisakye et al. 2016, Tweheyo et al. 2017) and lack of positive incentives, burnout caused by understaffing and excessive workload (Chene 2005), binding social commitments outside the workplace (Tweheyo et al. 2017), fear of getting infected by patients during epidemics and pandemics (Chene 2005), long commuting distances to rural workplaces (Chaudhury et al. 2006, Yamada et al. 2012), being located in a poor area (Chaudhury et al. 2006), competing domestic care responsibilities, individual personality traits (Callen et al. 2015), and possibly public sector recruitment of individuals with weak work ethics and low ethical standards (Hanna et al. 2018).

Studies have found high correlations between national absenteeism rates in the health and education sectors in developing countries (Chaudhury et al. 2006), suggesting that some drivers may not be specific to the health sector (Friedman 2018).

Drivers of absenteeism: Lessons from Uganda

Uganda is believed to suffer one of the highest rates of health workforce absenteeism in Africa, with a prevalence estimated to range between 37% and 48% (Tweheyo et al. 2017). A recent study based on interviews with 95 healthcare workers in rural areas combined with focus groups illustrates the diversity of factors driving absenteeism in the country, and serves as a caution against simplistic 'goodies' versus 'baddies' (Hanna et al. 2018) narratives focused on individual motivations alone.

Ugandan healthcare staff identified the following drivers of absenteeism:

- Low salaries combined with frequent late or non-payment of salaries (most frequently cited cause)
- Badly built and maintained staff accommodation, including lack of running water
- Underfunding of health units resulting in insufficient supply of essential medicines and supplies, including fuel for generators, disinfectants and protective gear
- Perceptions of injustice and of entitlement to absence due to unrewarding (in every sense) and often highly stressful working conditions
- A desire to seek supplemental income due to objective and social financial pressures
- Independent pursuit of further education without the option of obtaining study leave

- Weak supervisory structures and infrequent supervision visits to lower level facilities
- Overwhelming social pressure to attend weddings and funerals regardless of work commitments
- Social-cultural norms accepting of absenteeism

The study concludes that widespread absenteeism in Uganda is the result of "complex interrelated influences operating within—and external to—an individual healthcare worker". Multiple interviewees noted that senior administrators refrained from imposing sanctions for absenteeism because they acknowledged shared blame for the situation. One physician in-charge claimed that if absenteeism was no longer tolerated, no doctor would be willing to work in rural healthcare units under the prevailing conditions. (Uganda's public healthcare workforce vacancy rate was around 30% at the time.)

The authors note that working conditions in rural health facilities run by NGOs are comparable to those in government-run facilities, with the exception that salaries are paid on time. Nonetheless, "continuous monitoring and supervision of the health workforce in the former proved effective for minimising absenteeism".

Source: Tweheyo et al. 2017

Prevalence

Absenteeism is widespread and frequent in many lowand middle-income countries (Iles 2019) Onwujekwe et al. 2018), with some exceptions (Yamada et al. 2012). Studies have found rates ranging between 19% and 60%, but cluster around 35-40%, higher than the rates typically recorded for teachers in similar countries (Lewis 2006, see also Iles 2019, Chaudhury et al. 2006, Kisakye et al. 2016). Even when staff are physically present, they may not be actively working (Chaudhury et al. 2006), and de facto absenteeism rates relevant to service delivery may be even higher (Ackers et al. 2016, though see Tweheyo et al. 2017).

The wide range of methodologies used to gauge absenteeism rates make reliable cross-country comparisons difficult (Lewis 2006), especially as attendance rates may differ between mornings and afternoons (Kisakye et al. 2016) and between different days of the week (Goldstein et al. 2013). Data on absenteeism is usually aggregated to the country level, hiding what can be significant differences between regions (Fujii 2018) and rural versus urban settings (Yamada et al. 2012). Research from North America indicates that the emergence of workplace-specific 'absence cultures' may even cause significant variations at the level of individual health facilities (Davey et al. 2009), and some studies have found a correlation with clinics in disrepair and those with lower patient demand (Lewis 2006).

In low- and middle-income countries, absenteeism rates tend to be higher among doctors and pharmacists than among less qualified staff members (Ackers et al. 2016, Chaudhury et al. 2006, Tweheyo et al. 2017, Kisakye et al. 2016), a reversal of the pattern is observed in wealthy countries (Belita et al. 2013).

Globally, female health workers seem to be absent more often than their male counterparts (Belita et al. 2013, Kisakye et al. 2016; for a dissenting finding see Chaudhury et al. 2006), which is noteworthy as men are often assumed to be more prone to corrupt behaviour in general. However, the difference could be due to traditional gender roles, which can drive women to shoulder domestic care responsibilities for children or elderly relatives at the expense of their professional responsibilities (Tweheyo et al. 2017).

Impact

Rates of absenteeism of 34-50% in low- and middleincome countries cause a serious gap in health service coverage due to absent staff (Lewis 2006), negatively affecting health outcomes (Bouchard et al. 2012, Tweheyo et al. 2017, Friedman 2018). Qualitative research suggests that in some treatment contexts, it may be the leading cause of avoidable mortality (Ackers et al. 2016). However, there is a paucity of studies quantifying the effect of absenteeism on health outcomes (Goldstein et al. 2013).



How absenteeism causes more babies to be infected with HIV

A study of 591 women visiting an antenatal clinic in Kenya where the availability of HIV testing and counselling services depended on the presence of a single specialist nurse found significant health consequences for mothers and their children from absenteeism.

Women who made their first visit to the clinic when the nurse was absent were nearly 60% less likely to learn their HIV status during their pregnancy. This made HIV positive women less likely to receive medicines and services for the prevention of mother-to-child transmission of HIV. The authors calculate that a hypothetical absenteeism rate of 35% (as typically observed in other studies) would lead to 1.65 new HIV infections per year per nurse in that setting, a four-fold increase in the rate of new mother-to-child HIV infections. In addition, women attending the clinic were 13% less likely to eventually give birth at a hospital or health centre if the nurse had been absent during their first visit to the clinic.

Source: Goldstein et al. 2013

Absenteeism not only limits the quantity of services provided, but also undermines their quality. As noted above, absenteeism is especially widespread among highly qualified staff, whose roles includes mentoring and advising other healthcare workers (Kisakye et al. 2016). It exacerbates the general shortage of doctors in many countries, particularly in rural areas (Tweheyo et al. 2017), and can leave facilities reliant on untrained providers with virtually no supervision (Lewis 2006, Ackers et al. 2016). In addition, absenteeism at all levels further increases the workload on remaining staff (Kisakye et al. 2016), thus perpetuating the cycle of burnout, substandard care, demotivation and further absenteeism. With no doctors present, urgently required treatments can be severely delayed, resulting in patient deaths (Ackers et al. 2016). Furthermore, medicines may be prescribed with insufficient guidance so that patients are less likely to adhere (Friedman 2018), compromising their immediate recovery and heightening the risk of the emergence and spread of drug-resistant strains.

The economic costs of absenteeism go far beyond the public salary payments wasted on services not provided. For example, capital investments into buildings and medical equipment are partially wasted because facilities are often closed and hence not fully utilised (Lewis 2006, Rahmani et al. 2013). Absenteeism has also been linked to bad maintenance of clinics (Lewis 2006), though the direction of causality is not clear.

From a patient perspective, it is usually impossible to predict when a facility will be closed due to absenteeism (Lewis 2006, Banerjee et al. 2016). This creates economic losses because those seeking medical attention may have to visit clinics multiple times during working hours until they receive treatment. More broadly, absenteeism compounds often already severe capacity constraints (Kisakye et al. 2016, Tweheyo et al. 2017). The resulting backlog of patients waiting for care and occupying hospital beds for longer increases healthcare costs and negatively impacts patient outcomes (Bouchard et al. 2012, Tweheyo et al. 2017) as many health conditions worsen in the absence of timely intervention. One study calculated that eliminating absenteeism in clinics in northern India would increase the utilisation of government outpatient treatments of fevers (caused by a variety of diseases) from 18% to 50% (lles 2019).

INFORMAL PAYMENTS FROM PATIENTS

Description

Informal payments from patients are widespread in many countries. According to one definition, they are "a direct contribution, which is made in addition to any contribution determined by the terms of entitlement, in cash or in-kind, by patients or others acting on their behalf, to healthcare providers for services that the patients are entitled to" (Gaal et al. 2006, see also Chereches et al. 2013). This definition includes patient provision of goods that should be part of the service, such as meals, bedding or medicines.

Related practices are extremely diverse, and not always illegal, corrupt, or even harmful (Ensor 2004, Stepurko et al, no date, Allin et al. 2006, Balabanova et al. 2002, Gaal et al 2010). At one end of the spectrum, a patient may give flowers to a doctor after successful treatment to thank her for her efforts. At the other extreme, a doctor may withhold life-saving medical care unless a patient pays a large amount of cash up front. In between these extremes, there are infinite shades of grey.

Generally speaking, informal payments are more likely to constitute corruption if they are made before treatment, if they are actively solicited – or extorted – by the provider, and if they involve cash or expensive items (Balabanova et al. 2002). Even so, clear lines are hard to draw (Gaal 2006). For example, in a context where informal payments are near-ubiquitous, a patient may offer a 'gift' without regarding the transaction as voluntary, while the doctor may firmly believe the 'gift' is freely given (Allin et al. 2006). Gaal et al. 2006).

Drivers

There is considerable evidence that informal payments are more widespread in countries where public healthcare institutions are underfunded, and salaries (Gaal et al 2010, Akwataghibe et al. 2012) and quality of care (Habibov et al. 2017) are low.

Additional drivers of informal payments include cultural norms and habits, over- or understaffing, lack of private sector alternatives for wealthier patients who are willing to pay a premium to jump long waiting queues or to obtain better service (Allin et al. 2006), the absence of effective sanctions (Vian 2008), and the need for staff who bought their positions to recover their initial investment.¹

¹ Personal communication from Karen Hussmann, 03 March 2019.

Top-down accountability of healthcare staff is often weak due to the challenges of establishing effective government control over a large number of geographically dispersed employees. Bottom-up accountability too is commonly weak as patients typically cannot discipline bribe-takers by voicing criticism or choosing different healthcare providers. In addition, information asymmetries create opportunities for extortion as patients usually cannot determine for themselves which procedures or treatments they require (Savedoff et al. 2006). Finally, doctors are often gatekeepers for referrals required for further treatment (Stepurko et al, no date).

Prevalence

Many studies, including multi-country studies (for example Habibov et al. 2017), have sought to quantify the prevalence and scale of informal payments, some breaking down data further by sub-sector, provider type, payer characteristics, and type of payment (Mackey et al. 2018, Stepurko et al, no date). However, the definitions used by studies vary widely, often making cross-country comparisons impossible. Even different studies conducted within the same country can report strongly divergent figures (Gaal et al. 2006). One survey found that the amounts patients paid varied by a factor of ten between different regions of the same country (Gaal et al 2010).

A global survey covering 107 countries conducted by Transparency International during 2012-2013 using a standardised instrument found that 17% of all health service users had "paid a bribe in any form" over the preceding year (TI 2013, see box below). The true prevalence of bribery is likely to be even higher because of survey respondents' reluctance to openly admit to paying bribes, and because informal payments include a broader range of 'contributions' than just bribes.



Global TI survey on bribe paying by health service users

Transparency International surveyed more than 114,000 respondents in 107 countries for the 2013 Global Corruption Barometer, asking about their experiences and perceptions of corruption (TI 2013). Across the countries surveyed, 62% of respondents had interacted with health services during the past year, more than with any other public service, and 17% had paid a bribe. Assuming these results are globally representative, around 800 million people pay a bribe to health services every year. The data indicates that in India alone, 290 million people pay bribes.

The incidence of bribery reported ranged widely between regions and countries, from 1% to 51%. Generally, bribery rates were higher in Africa, Central and Eastern Europe, and the MENA region, and lower in Western Europe and the Americas. There were significant variations between individual countries within regions, especially across Asia. Some of the results were surprising. Countries where less than one in ten people who had come into contact with medical services had paid a bribe included all Latin American countries covered, Bulgaria, Georgia, Nepal, Nigeria, the Philippines, Rwanda, and Thailand. More than 40% reported paying bribes in Morocco, Sierra Leone, Tanzania, Uganda, Ukraine, and Yemen.

Perceptions of corruption in the sector tended to be far higher than reported incidences of bribe paying. Across all countries, 45% of respondents regarded health services as "corrupt or very corrupt," with very few countries below the 20% mark. For example, in Germany, 48% regarded the medical and health sector as corrupt, and in Nigeria, this figure was lower, 41%, but still very high compared to only 9% of medical service users there reporting actually paying a bribe. This gap between personal experiences and perceptions is likely to have multiple reasons, including that patients who have never personally encountered corruption may nonetheless regard the pharmaceutical sector, high level decision-makers, or the system as a whole as corrupt.

Impact

The impact of informal payments on health systems, public health outcomes and patients depends strongly on context (Ensor 2004). In some circumstances, informal payments are a form of 'survival corruption' perpetrated by people whose formal pay is insufficient to cover basic living expenses, and as such may be crucial to enabling healthcare staff and even entire facilities (Associated Press 2019, Hutchinson et al. 2018, Akwataghibe et al. 2012) to continue operating. They may be the most important source of healthcare financing in some countries, and removing them overnight "would cause the total collapse of the system" (Gaal et al. 2006, see also Marquette et al. 2019). For example, informal payments probably allowed healthcare workers in Tajikistan to double or triple their incomes at a time when average health sector salaries stood at just US\$5 per month (Falkingham 2004).

However, not all informal payments are a form of survival corruption, and proceeds may not be distributed equitably, or according to actual need. For example, physicians captured the lion's share of informal takings in Polish general hospitals (Gaal et al. 2006), suggesting that other staff received little or no benefits.

Informal payments can deter or prevent patients from accessing services. However, even within a country, the sums demanded or expected can vary strongly from one type of health service to the next (Stepurko et al, no date), as can individuals' ability to pay. In one study, a high proportion of Bulgarian patients were able to cover payments from their current income (Balabanova et al. 2002), but other studies have documented many patients delaying hospitalisation, selling assets or going into debt to meet costs (Gaal et al 2010). In contrast, in Congo, many hospitals appear to treat all patients, but those who cannot pay are subsequently detained until their families settle the bill. While the payments demanded are informal and illegal, doctors defend the practice as essential for recouping procurement costs in the absence of public funding (Associated Press 2019). Overall, it appears that informal payments present the greatest barrier to access in the case of inpatient treatment, as the sums of money involved tend to be far larger (Lewis 2006, Stepurko et al, no date).

Exclusion may take subtle forms. For example, poorer patients may choose – or be forced – to seek treatment in less specialized facilities or visit less specialized or qualified healthcare personnel (e.g. nurses instead of doctors) where less payment is required (Habibov et al. 2017). Anecdotal evidence suggests that in some countries, poor patients may self-exclude out of shame over their inability to give a gift to underpaid medical staff even when health workers do not actively solicit such contributions.² Overall, while templates for rigorous empirical research exist, policy makers in most countries have failed to commission studies to determine where, when and how informal payments do more harm than good (Gaal et al 2010), limiting their ability to effectively tackle the problem.

² Author conversation with health service expert, Georgia, 2004.

THEFT AND EMBEZZLEMENT

Description

Theft and embezzlement of money, medicines and other medical equipment and supplies by frontline healthcare staff is widespread in some countries. This includes the theft of medicines for resale, the pocketing of budgeted funds and user fees (McPake et al. 1999), and the pilfering of medical supplies, stationary, and petrol. In some cases, healthcare staff also substitute original materials with inferior ones (Onwujekwe et al. 2018).

The theft and resale of publicly funded medicines, vaccines and medical supplies (The Nation 2019) on the market is widely believed to be particularly common and harmful. Staff in frontline facilities may commit theft collaboratively as well as individually (Onwujekwe et al. 2018), sometimes in collusion with private pharmacies (The Nation 2019).

Drivers

The combination of low salaries, demotivated staff and weak oversight creates opportunities for embezzlement, especially in rural areas; weak professional norms often compound the problem (Serneels et al. 2018). Enabling factors include weak physical security, record keeping, inventory management (Bate 2011a) and facility management, and a lack of clear policies (Bouchard et al. 2012).

Public sector employment rules that make it difficult or impossible to sack staff can undermine efforts to deter corrupt behaviour. However, note that embezzlement also occurs in wealthy countries where staff are paid well (Couffinhal et al. 2017). Similarly, weaknesses in vertical oversight are evident not only in governmental systems, but also in the operations of international donor programmes (Bate 2011b).

Prevalence

In some regions, theft and diversion of medicines, vaccines and other medical supplies for private use has been observed as commonplace, with diverted supplies mostly thought to be sold for personal gain (Onwujekwe et al. 2018), and proceeds sometimes shared by multiple individuals colluding in a scheme. For example, a government audit in Togo revealed that roughly a third of the antimalarial medicines provided by the Global Fund, worth well over US\$1 million, had been stolen (Bate 2011a). A 1999 study of Ugandan health facilities found a median drug leakage rate of 76%; in only one of the ten facilities surveyed did more than half of drugs supplied reach the patients who attended it (McPake et al. 1999). Surveys of medical staff in various Latin American countries suggest that small-scale theft by health personnel is high in that region too (Lewis 2006).

According to one estimate, around 30 million out of every 100 million high-quality antimalarial dosages donated to Africa by donors are stolen. However, only a fifth of this total volume of theft is believed to have occurred at the service delivery level (Bate 2011a). For end users, it is therefore typically impossible to determine whether local stock-outs are due to high demand, theft by frontline staff, or higher-level corruption further up the supply chain.

Impact

Embezzlement can contribute "significantly" to shortages and stock-outs of drugs and other medical supplies in some settings (Onwujekwe et al. 2018, McPake et al. 1999). A study based on exit surveys of patients in Costa Rica, a country known for its comparatively low corruption levels, found that half of respondents had not received a prescribed medication due to non-availability (Lewis 2006).

An immediate consequence is that patients may not be able to access medicines (Kaheru 2010) or medical devices (Bouchard et al. 2012) at all, or buy falsified, degraded, expired, inferior or inappropriate medicines from private sources (AI Jazeera 2010), leading to further declines in public health, the inability to work, permanent disability, or death. In the case of non-communicable diseases such as cancer or diabetes, supply gaps and treatment discontinuation due to unaffordability leads to disease progression and lower survival rates (Mostert et al. 2011). For infectious diseases, the impacts can be systemic as well as individual, as the example of HIV shows.

Systemic impacts of theft: The example of HIV

When HIV testing kits are missing due to theft (The Nation 2019), those infected may unwittingly spread the virus to other people. Stock-outs of free contraceptives (Rahmani et al. 2013) may also lead to new infections. Interruptions in treatment regimes for HIV, malaria (Nayyar et al. 2012) and tuberculosis can lead to the development of drug resistance, with drug-resistant strains subsequently spreading through the wider population (AI Jazeera 2010). As costly second-line treatments are often not locally available, those infected are effectively condemned to death (Friedman 2018).

In addition, frequent stock-outs can lead patients to hoard drugs at home, further compounding drug shortages. One study found indications that only 20% of people collecting free malaria drugs in Uganda were genuine patients. The other 80% were mostly stockpiling the free drugs in case of future urgent need (Kaheru 2010).

SERVICE PROVISION

Description

Corruption in service provision covers a wide range of practices, including kickback-driven referrals, unnecessary procedures, overcharging, provision of inferior services, and false treatment reimbursement claims. In extreme cases, doctors may charge patients for unnecessary or fake surgeries, placebos sold as medicines, and nonperformed diagnostic tests (Mehtta 2013).



Physician kickbacks and self-referrals: unethical but not necessarily illegal

Across countries, doctors with financial conflicts of interest may be tempted to refer patients for treatments they do not require, refer them to the provider paying the highest commissions rather than the best healthcare provider, and order more services than patients need, especially costly hightech interventions (Vora 2017, NYT 2009).

The dividing line between legal and illegal behaviour is often hard to draw or understand (Gornall 2015). For example, distinguishing between a kickback and an authentic professional fee can be difficult (NYT 2009, Sachan 2013). Some policy experts caution against a blanket ban of the practice (Morrison 2010).

Drivers

The drivers are diverse, but are largely rooted in the fact that individual provider's incentives are often not aligned with public health goals (principal-agent problem). In many cases, healthcare providers have economic (Bloom et al. 2001) or career (Sachan 2013) incentives to make referrals or administer treatments that are not driven by medical considerations alone. Additional drivers are increasing specialization, time constraints in general practice, fear of lawsuits over not consulting an expert (NYT 2009), the need to recover investments into expensive equipment (Vora 2017), and insurance reimbursement policies that create perverse incentives (Rao 2015).

Prevalence

These forms of corruption can be found worldwide, are widespread in countries both rich and poor, and are observed among private (Gornall 2015) as well as public healthcare providers. In some cases, they can involve collusion between providers and patients at the expense of public or private insurers. Because of the broad range of practices, and because doctors can differ on which treatment is necessary for any given patient or indication, and appropriate pricing levels are disputed, there are no statistics on the global prevalence of corruption in service provision.



The global prevalence and price tag of unnecessary caesarean sections

A study published by the World Health Organisation found that 6.2 million unnecessary caesarean sections are performed worldwide every year, two million of those in China alone. The calculation is based on the difference between the average rate of caesareans required for medical reasons – a global constant – and actually observed rates in 137 countries.

The authors warn of possible negative consequences for maternal and child heath, and calculate that the US\$2.3 billion spent on unnecessary operations would be enough to finance the unmet need for caesarean sections by patients in poorer countries more than five times over (Gibbons et al. 2010).

Impact

Corruption in service provision greatly inflates the cost of healthcare provision, to the detriment of patients, taxpayers and public health. For example, physician kickbacks and self-referrals are widely believed to be one of the primary causes of the increasing cost of healthcare in the US (Morrison 2010). In addition, these corrupt practices often directly harm patients, as the Indian hysterectomy scandal illustrates.



Women in India under the knife

In 2013, an investigation by Oxfam sounded the alarm over hysterectomies unnecessarily performed on women in some regions of India, apparently on a grand scale (Oxfam 2013, Srivastava 2018). In one state alone, 7,000 to 50,000 procedures had been performed in the span of a year (Rao 2015).

Patients were referred to hospitals by quacks, middlemen and doctors receiving kickbacks (Mehtta 2013), or underwent the operation after walking into hospitals to seek treatment for unrelated health issues. The scams seemed to deliberately target poor and illiterate women (Rao 2015, Srivastava 2018). Victims paid out of their own pockets, a public health insurance scheme covered the cost, or both (Rao 2015, Narayanan 2015).

The consequences for the affected women and their families were severe. Some women died of diseases that had remained untreated while hysterectomies were performed (Narayanan 2015), while others died of complications caused by the surgery itself. Survivors were often permanently disabled as a result of botched operations, and unable to resume work. Medical bills left many families in debt. Obviously, all victims, many of them in their twenties, are now unable to have children. Some villagers reported that they would never again visit a doctor or take medicine (Rao 2015).

The hysterectomy scandal reflects systemic corruption in India's healthcare system. The same state insurance also incentivises doctors to perform unnecessary caesarian sections and cataract surgeries (Rao 2015).

FAVOURITISM

Description

Favouritism occurs when healthcare providers give preferential treatment to patients with whom they have social connections, at the expense of services provided to other patients. Favouritism can be mediated through personal ties, or more widely through shared membership in wider ethnic, religious or cultural groups. Even though money does not change hands, implicit or explicit expectations of future reciprocity make this a form of corruption.

Drivers

The phenomenon is driven by well-documented human psychological traits, notably the innate tendency to favour family members and one's own 'in-group', and cultural norms of reciprocity. Favouritism occurs when these tendencies are left unchecked by formal structures and processes.

Prevalence

Favouritism in healthcare service delivery has been documented in a variety of contexts, including in Afghanistan (Rahmani et al. 2013), Bosnia (Handlos et al. 2016), and Uganda (Stephens et al. 2017). While there appears to be no reliable cross-country data on its prevalence or scale, the practice appears to be widespread, especially in contexts where demand for services exceeds available supply (Stephens et al. 2017).

In Afghan hospitals, personal contacts enabled patients to jump queues and were considered necessary for receiving high quality care. Doctors and nurses also extended favours to patients they had no personal contacts with, but who were connected to other members of staff at the same facility (Rahmani et al. 2013).

Queue-jumping enabled by favouritism has also been described as "very common" in Bosnia. Interestingly, a key favour patients could obtain there via personal connections was not having to make informal payments to healthcare providers (Handlos et al. 2016). In Uganda, in a context where demand for surgeries far outstripped supply, well-connected patients were able to secure treatment for themselves. In that particular setting, researchers found that social ties were more effective in obtaining an operation than the payment of a bribe (Stephens et al. 2017). Due to the paucity of data, the impact of favouritism on healthcare delivery cannot be quantified. Nonetheless, when gaining access to treatment is a zero-sum game, favouritism clearly creates losers and winners. In the studies reviewed above, women of low socioeconomic status from rural areas (Rahmani et al. 2013), returnees to the country with few social ties (Handlos et al. 2016), and less well connected individuals (Stephens et al. 2017) lost out. In the case of Uganda, due to limited resources, 42% of patients did not receive surgical care (Stephens et al. 2017). If favouritism rather than medical considerations drives treatment decisions by healthcare staff, it is likely to result in the suboptimal and inequitable allocation of public resources.

A study of the impact of ethnic favouritism in 18 countries in sub-Saharan Africa illustrates the salience of favouritism for healthcare outcomes. It found that people sharing the same ethnicity as the country's leader experienced an average reduction of 0.4% in infant mortality compared to their fellow citizens, presumably due to ethnic favouritism (Franck et al. 2012). The degree to which this finding can be extrapolated to the micro-level of frontline service delivery is unclear.

MANIPULATION OF DATA

Description

Manipulation of data includes fraudulent billing for goods or services not provided, and the creation of 'phantom' patients to claim additional payments in systems where individual healthcare providers or facilities get compensated for the number of people treated (Savedoff et al. 2006), and seeking reimbursements for treatments that are more expensive than those actually delivered (Jones et al. 2011, Savedoff 2007).

Drivers

Systems that separate the financing and provision of healthcare give rise to principal-agent problems. Providers have the ability to increase revenues by manipulating performance data that constitutes the basis for reimbursements (Savedoff 2007), at times in collusion with patients (Savedoff et al. 2006). Note that insurance fraud is also widespread in systems where patients, rather than providers, bill insurers directly (Jones et al. 2011).

Prevalence

Data manipulation is widespread in systems with separate financing and provision (Savedoff 2007). These are common in high-income countries and in the middleincome countries of Latin America and Asia (Savedoff et al. 2006), and over the past decade have also been adopted by some low-income countries. It has been documented in a wide range of countries, including the United States, Colombia, Canada (Savedoff 2007), the United Kingdom (Heaton 2019), and South Africa (Jones et al. 2011).

Impact

In this form of corruption, the victim is typically not the individual patient, but the taxpayer, as public health insurance foots the bill. The aggregate damage to health budgets can be substantial. All forms of fraud taken together are estimated to cost the United Kingdom's public health system US\$1.7 billion per year (Heaton 2019). The corresponding estimate for South Africa is up to US\$1 billion annually (Jones et al. 2011).

In some contexts, fraud by service providers appears to be a major hurdle³ for the effective implementation and functioning of so-called pay-for-performance or performance based financing schemes (Eijkenaar et al. 2013, Turcotte-Tremblay et al. 2016).

³ Personal communication by Dr. Raymond Tweheyo, 03 March 2019.

ANTICORRUPTION IN HEALTHCARE SERVICE DELIVERY: GENERAL PRINCIPLES

"As more money is devoted to health, the question becomes one of better health for the money..."

World Health Organisation (WHO 2018b)

MORE MONEY IS NOT ENOUGH

Four hundred million people still lack access to basic health services

The World Health Organization (WHO) estimates that US\$7.5 trillion is spent on health every year; around US\$1,000 per person on average. The sector represents close to 10% of global GDP. Total health spending is growing faster than gross domestic product, especially in low- and middle-income countries, and an increasing share of this funding comes from public sources (WHO 2018b).

Nonetheless, as WHO Secretary General, Dr Tedros Adhanom Ghebreyesus, has noted, at least 400 million people still have no access to basic health services (WHO 2017). Out-of-pocket health expenditure drives more than 100 million people into poverty every year (WHO and World Bank 2017).

A major cause of these gaps is a shortage of resources. In high-income countries, the median per capita expenditure on healthcare is over US\$2,000 per year. In low- and lower-middle income countries, the corresponding figure is just US\$100 per year. When just isolating low-income countries, government health spending per person averages a mere US\$9 (WHO 2018b). Clearly, nine dollars a year will only stretch so far. For this reason, up to an additional US\$370 billion a year is required to reach UHC, of which donors will have to contribute US\$17–35 billion (WHO 2017).

However, the cost of achieving UHC worldwide pales compared to the resources currently being lost to corruption in the health sector. As noted above, curbing corruption in the sector could free up enough resources to pay for universal health coverage worldwide (Jones et al. 2011, WHO 2018b).

Curbing corruption: difficult but necessary

The WHO itself has emphasized that in addition to requiring more resources, achieving UHC will also require existing resources to be used more effectively:

"In most low- and middle-income countries, sustaining progress towards UHC requires both more public funding (revenues) and more effective public spending (efficiency)... More effective use of available resources is essential... Countries could potentially achieve significantly greater health system performance, including improved health outcomes, at current levels of health spending." (WHO 2017)

The preceding sections of this report have documented that corruption is a major factor undermining the performance of health systems in many countries. Corruption weakens all of the five dimensions that determine good health system performance – equity, quality, responsiveness, efficiency, and resilience (WHO and World Bank 2017) – and has been found by multiple studies to have a significant negative impact on important health outcomes (Makuta et al. 2015, Muldoon et al. 2011, Olafsdottir et al. 2011, Ciccone et al. 2014, Witvliet et al. 2013).

Nonetheless, the international health policy community has traditionally paid little attention to the problem of corruption, for several reasons. Corruption is hard to define, and some corrupt practices are actually ways of making dysfunctional systems work. (One example, noted above, is that informal payments by patients may in some contexts enable the continuation of healthcare service provision in the absence of sufficient government funding.)

Also, there is a risk of placing excessive blame on underpaid and overworked front-line service providers for problems that are structural and beyond their control. Furthermore, corruption is hard to research, and there is a lack of evidence about what works to tackle it (Hutchinson et al. 2018). Finally, donors in particular fear that accurately assessing the extent of corruption in their programmes and discussing the issue openly could undermine public and political support for aid to the sector (Savedoff et al. 2016), and thereby do more harm than good in terms of global health outcomes. Above all, the very structure of health systems makes curbing corruption in healthcare service delivery extremely challenging:

"Health systems are prone to corruption because uncertainty, asymmetric information and large numbers of actors create systematic opportunities for corruption... [In addition,] the health sector is an attractive target for corruption because so much public money is involved... The presence of so many actors exacerbates the difficulties of generating and analysing information, promoting transparency and even identifying corruption when it occurs... When corruption is detected, it may be difficult to attribute it to a particular individual, or to distinguish corruption from a misjudgement or error." (Savedoff et al. 2006)

Tackling corruption in the sector is not easy – but then, nor is improving global health. Without curbing the most harmful forms of corruption, it will be practically impossible to deliver health services to the 400 million people who still lack access, improve the quality of services for those who already have access, prevent 100 million people a year from being driven into poverty, and avert 41 million child deaths between now and 2030.

Why donors cannot afford to ignore corruption in their healthcare programmes

This urgent need to tackle corruption extends to programming by donor agencies. Between 1990 and 2014, health aid from all donors grew from US\$5 billion to US\$23 billion, a multiple of the growth rate of nonhealth aid. Overall, this funding is widely believed to have significantly improved health outcomes, and is seen as a success story even by aid critics (Savedoff et al. 2016).

While foreign aid accounts for less than 1% of all worldwide spending on health, it still matters, especially to the people who need healthcare most. In low-income countries, donors account for nearly 30% of all health expenditures (including money spent on healthcare by private individuals). Donors' share of total expenditures has already outstripped that of domestic public funding, and continues to grow. Foreign assistance is especially prominent in the area of infectious diseases. Donors spend over twice as much on combating HIV/AIDS, malaria and tuberculosis in low-income countries than national ministries of health do. Immunization too relies heavily on external sources of funding in most low-income countries (WHO 2018b).

The final section of this report discusses how, despite the many formidable challenges involved, the health policy community can move forward and effectively tackle corruption in healthcare service delivery.

CURBING CORRUPTION TO IMPROVE HEALTH OUTCOMES

"The aim is not to eliminate corruption but to optimise development results."

Johnsøn 2015

Overarching aim: improve health outcomes

The scale, structure and complexity of health systems makes curbing corruption in healthcare, including in service delivery, extremely challenging (Savedoff et al. 2006, see also above). With corruption taking a variety of forms at different levels and locations within the overall system, presenting a myriad of problems and potential entry points, health policy makers and donors have often struggled to decide which types of corruption to prioritise. Due to this uncertainty, past anticorruption efforts in the sector have often lacked focus, or else have focused on the most visible rather than the most harmful forms of corruption (Bauhoff et al. 2018, Johnsøn 2015).

There is growing consensus among experts that prioritisation is essential, and that anticorruption efforts should focus on those types of corruption that have the worst effect on health outcomes. In other words, successfully curbing corruption in healthcare service delivery requires putting health outcomes at the heart of the anticorruption agenda. This means moving away from a normatively-driven scattershot approach in which curbing corruption is seen as an end in itself, and towards an empirically grounded approach in which anticorruption efforts are geared towards improving people's health and well-being. Thus, the overarching aim should not be to eliminate all corruption - which is in any case impossible but to minimise those practices that most weaken health systems and undermine health outcomes (Bauhoff et al. 2018, Johnsøn 2015).

In order to achieve this overarching aim, it is essential to understand how health systems work, assess the scale and impact of corruption, develop an anticorruption agenda focused on improving health outcomes, and finally embed that agenda into the design and management of health systems and programmes. These four elements are discussed in more detail below.

1. Understand how the system works

Talking about an ideal-world "anti-corruption strategy with strong political backing and a willingness to take a position and follow through" (Lewis 2006) only makes sense if there is indeed political will coupled with an ability to follow through. In many settings, this is often not the case. In

order to be successful, anticorruption efforts need to take into account the opportunities and constraints generated by the wider environment in which they take place (USAID 2018).

Importantly, this principle applies both to healthcare systems managed by governments, where senior decision-makers and lower-level staff may have strong incentives to perpetuate corruption, and to programmes led by donor agencies, which may have strong institutional incentives to not detect and effectively tackle corruption within their own portfolios (Bauhoff et al. 2018). Note that refusing to acknowledge these inconvenient truths, and tailor health programme designs and anticorruption measures accordingly, is not in the interests of patients.

Therefore, first and foremost, anticorruption efforts must be based on a thorough understanding of how a given health system functions in practice, the underlying power dynamics and drivers, the incentives and disincentives of the various players involved, and the vulnerabilities that leave the system open to corruption (Onwujekwe et al. 2018, Savedoff et al. 2006, Savedoff 2007, Hutchinson

Civil service reform experiences: Lessons for anticorruption reforms

As a team of seasoned experts has noted, "Corruption is a problem for development not only when public officials embezzle public funds, but also when they resist reforms that would improve governance and reveal their abuses." (Savedoff et al. 2016).

Political elites can – and often do – benefit from corruption in healthcare service delivery (and other public services) in two ways. First, they can offer employment or promotions to healthcare staff in exchange for political support, including support at the ballot box. Second, they can personally profit by selling positions or promotions in the government bureaucracy, or require existing employees to pass a share of the proceeds of corruption up the ladder. In either case, the incentives for public sector workers to deliver services are weak (Friedman 2018). This explains the frequently-made observation that unproductive, absent and corrupt healthcare providers in many countries are rarely if ever punished, and usually continue to enjoy the same pay and promotion prospects as their peers (Lewis 2006).

The widespread sale of positions in the health sector has been reported in numerous countries, including Bosnia, Ghana, and Uganda (Lewis 2006), while politically motivated appointments, including of unqualified individuals, have been reported in et al. 2018, Johnsøn 2015). Donor programming in particular is often insufficiently informed by the political dynamics that shape how national health systems operate in practice. As a result, donor efforts to strengthen health systems often fail, and health outcomes suffer accordingly (see Altaf 2011 for an excellent first-hand account and analysis).

On a technical level, it may be useful to classify health systems according to whether they directly provide healthcare services (as is the case in most low-income countries), or whether they separate public financing from provision, as each of these systems tends to generate different patterns of corruption (Savedoff et al. 2006, Hussmann 2012).

On a political level, an analysis of critical success factors in civil service reform efforts in general provides some useful pointers on how to design and implement anticorruption reforms in the face of resistance by entrenched vested interests.

countries including Nepal (Sharma 2010), Kosovo (Vian 2014), Ethiopia and the Dominican Republic (Lewis 2006).

The link between such practices and corruption has also been widely documented, including in empirical studies. A large-scale randomised controlled trial in Pakistan found that doctors connected to politicians and those working in uncompetitive constituencies were more often absent from work. The success of two experimental interventions aimed at reducing absenteeism depended largely on the local political context. For example, more frequent inspections increased attendance by doctors only in the most competitive constituencies, but remained without impact in the others (Callen et al. 2016).

Efforts to curb corrupt practices can trigger active opposition by the beneficiaries of the status quo – a category that may include political elites (Johnsøn et al. 2012), administrative staff, and healthcare providers themselves. For example, in India, an initially highly effective monitoring and sanctions system was deliberately undermined by the responsible health administration (Banerjee et al. 2010).

Therefore, it is unsurprising that two evaluations from the World Bank and the Organisation for Economic Co-operation and Development both show that efforts to reform civil services in countries with high corruption levels in particular have largely been ineffective. A recent review of the available evidence concluded that there is "fair evidence that civil service reform overall has not been effective in reducing corruption", and that while relevant evaluations "do not specifically focus on corruption, the ineffectiveness of such reforms in curbing corruption can be inferred from the studies" (Johnsøn et al. 2012).

Where civil service dynamics centre on patronage or extracting economic gain without reciprocating any benefits to society (rent-seeking), rather than on the delivery of quality public services, health outcomes are likely to be poor (Bold et al. 2018). Nevertheless, absenteeism and underperformance in health tends not to be a major election issue in most lower-income countries, for several reasons. Healthcare providers directly and strongly benefit from the status quo while its costs are diffused, and they are typically a powerful and well-organised interest group. In contrast, patients lack power and 'voice', especially in countries where the wealthy and middle classes have no stake in the public health system because they have 'exited' to private healthcare providers (Chaudhury et al. 2006).

A review of the literature on civil service reform efforts argues that "the success (or lack thereof) of many reforms can be linked back to the governance environment in which they take place and that the reforms with the most potential for success pay careful attention to the power constraints that are in place, in particular those present at the national level. This does not mean that local interventions may not succeed, but that reforms need to carefully assess at which level power constraints are binding" (Bold et al. 2018). The review concludes that successful civil service reforms – and, by extension, successful anticorruption reforms in the public health sector depend on a thorough analysis of political dynamics, coalition building, extended negotiation processes, and sequencing of individual reform measures. It highlights that successful reform efforts have often begun by using data on weak public sector performance and outcomes (such as performance in international standardised student tests) to highlight existing problems and build broad popular support for reform efforts. Shifting the balance of power in favour of reform involved using the media to build awareness, mobilising previously underrepresented groups that rely on public services, and sometimes forming coalitions with civil society and business groups, while weakening the hold of interest groups opposed to change (Bold et al. 2018).

Even after political battles had been won, resistance by front-line professionals (see also Onwujekwe et al. 2018) and bureaucrats, capacity constraints and technical issues often posed challenges to the subsequent implementation of reform measures (Bold et al. 2018).

A possible exception to the coalition building and negotiation approach outlined above are the public sector reforms launched in Georgia in the wake of the 2003 'Rose Revolution'. These were widely regarded as very successful in improving service delivery in general and rooting out lowlevel corruption in particular (World Bank 2012). However, Georgia's reforms were initiated, designed and implemented by a government that was very strongly committed to curbing corruption, had concentrated all power in its hands (and was not shy of using it), enjoyed strong public support, and received substantial external support

2. Assess the scale and impact of corruption

Second, it is necessary to determine the scale of corruption, and its impact on health outcomes. Conducting an in-depth portfolio estimate can measure the baseline corruption and identify prevalent patterns of corruption within an existing health system component or donor programme (Savedoff 2012, Michaud et al. 2015), which combined with a risk-based assessment (Bauhoff et al. 2018) can lay solid foundations for subsequent mitigation efforts (UNDP 2011, WHO 2018d, Johnsøn 2015).

As not all forms of corruption are equally harmful (Hutchinson et al. 2018, Allin et al. 2006), and the most visible forms may not be the most harmful ones (Bauhoff et al. 2018, Savedoff et al. 2016), the assessment should systematically map out the locus and nature of corrupt schemes (Klitgaard et al. 2000), and evaluate each corrupt practice's impact on the functioning of the health system and on health outcomes (Bauhoff et al. 2018, WHO 2018d).

This requires conducting research at the service delivery level to determine the prevalence and salience of various corrupt practices (for an example, see GES 2018), including from policy, administrative, provider and patient perspectives (Onwujekwe et al. 2018, WHO 2018d, Hussmann 2012). For example, the degree to which patients in different countries see informal payments as a problem may differ considerably (Stepurko et al, no date, Allin et al. 2006), and poor, male or rural patients'



concerns may not be the same as those of wealthier, female or urban citizens (Gaal et al. 2006, Gaal et al. 2010). Note that the popular support required for some anticorruption reforms at the service delivery level to succeed will only be forthcoming if the type of corruption being targeted is seen as a problem by patients themselves.

Corruption-specific research could be integrated into broader research efforts required to support the strengthening of health systems in general (WHO and World Bank 2017). This could not only reduce assessment costs, but also help to ensure that overall health system reforms are designed from the outset to minimise opportunities and incentives for corruption (see below).

Because patterns of corruption are not static, gathering reliable monitoring data on an ongoing basis (WHO 2018c) and conducting evaluations of health outcomes (Kenny 2017) is required to track progress, identify problems, and take corrective actions as and when required. Effective oversight is only possible if decision-makers can keep track of processes on the ground and their effect on health outcomes.

3. Develop an anticorruption agenda focused on improving health outcomes

The third step is to develop an anticorruption agenda that sets out clear priorities. There are three factors that should guide prioritisation:

First, efforts should concentrate on those practices that are most likely to occur and have the largest negative effects on health outcomes, especially for vulnerable groups (Bauhoff et al. 2018).

Second, anticorruption efforts should focus on those areas where there is a reasonable chance of success (Hutchinson et al. 2018) considering existing power relationships (Bold et al. 2018), political economies, system dynamics, the often conflicting interests of the various stakeholders involved, and available resources and capacities. Note that top-level political will for systemic reforms is an important factor, but not the only factor. At times, it might be possible to pursue some sector-specific approaches even in the absence of political will (Vian 2008); conversely, political will alone does not always guarantee successful implementation.

Third, prioritisation should take into account trade-offs and opportunity costs. Some measures, such as abolishing informal payments or replacing them with formal user fees, may create new barriers to access for some users or inadvertently weaken health systems (Chene 2005). Such fees are typically regressive and may result in worse health outcomes overall (Mengqi Qin et al. 2019). The affordability and comparative cost-effectiveness of competing anticorruption measures should also be considered. A public health system with a per capita budget of nine dollars cannot be expected to afford the same oversight mechanisms as a system with a budget a hundred times that size (Lewis 2006), and overly rigid or costly control systems may have a negative net effect on health outcomes.

As this report has documented, many corrupt practices share similar drivers such as low salaries and weak oversight. In addition, single-issue interventions may only result in shifting corruption to other points in the system (Michaud et al. 2015). Therefore, rather than dealing with each corruption type in isolation, the anticorruption agenda should take a holistic approach (Hutchinson et al. 2018, UNDP 2011) to strengthening health systems as a whole, with the overarching aim of improving health outcomes (Bauhoff et al. 2018, Johnsøn 2015). The agenda should be developed in close collaboration with representatives of all stakeholders to ensure that it is realistic, widely understood, broadly owned, and viewed as legitimate (Hutchinson et al. 2018, Klitgaard et al. 2000, Michaud et al. 2015). Effective anticorruption agendas are likely to combine several different approaches.

Involving key stakeholders such as policy makers, healthcare providers and patients in setting the research agenda, reviewing research findings and conducting the analysis can substantially improve the process and help to foster consensus on the challenges ahead (Hutchinson et al. 2018, Klitgaard et al. 2000, Onwujekwe et al. 2018).

4. Embed the anticorruption agenda into overall health programming

Fourth, embed the anticorruption agenda into the design and management of health programmes (UNDP 2011), notably into national health system strengthening efforts (WHO and World Bank 2017). Experience shows that stand-alone anticorruption components tacked onto programme designs post hoc tend to be ineffective (UNDP 2011).

Therefore, national health systems and donor programmes alike should be deliberately designed to realign incentives (Silverman et al. 2015) and prevent, deter, detect, and – crucially – respond to instances of corruption (Bauhoff et al. 2018, Johnsøn 2015, WHO 2018d). For example, when major health reforms are underway, it may be useful to adapt laws and regulations so that the system minimises opportunities for corruption (Vian 2008).

Anti-corruption should be mainstreamed into health system plans and strategies. This can be done by routinely including corruption risk analyses in wider sector situation analyses, using these analyses to prioritise which risks to address, and integrating strategic objectives on addressing corruption risks into the final plans and strategies. For example, this could be done while developing five-year Medium Term Expenditure Frameworks.

The following section discusses commonly proposed or used anti-corruption approaches that could be integrated into broader health system plans and strategies, and donor programme designs.

ANTICORRUPTION IN HEALTHCARE SERVICE DELIVERY: SPECIFIC MEASURES

OVERVIEW

Anti-corruption measures at the service delivery level can take many different forms. For example, they can focus on identifying and punishing past and present instances of corruption, or instead aim to prevent corruption occurring in future. Others may not even overtly target corruption per se, instead more broadly aiming to increase information, boost transparency and strengthen governance and overall health system performance (Savedoff 2007). The diversity of drivers of corruption is reflected in the diversity of potential remedies proposed by experts (for examples see Lewis 2006, Michaud et al. 2015, Vian 2008, Fryatt et al. 2017).

This section draws together the most commonly proposed anticorruption measures, grouped into four broad categories:

- Strengthening top-down control
- Strengthening bottom-up accountability
- Strengthening staff morale and motivation
- Anticorruption within donor programmes

Importantly, none of the potential measures discussed below are likely to have a significant lasting impact if they are implemented in isolation, let alone tacked onto systems that are structurally deeply flawed. There is no single magic bullet.

STRENGTHENING TOP-DOWN CONTROL

Rationale

"Developing national capacity to design, operate, monitor and continuously adjust the health system is essential for UHC to be achieved and sustained."

WHO and World Bank 2017

Research on health systems in lower-income countries frequently identifies weak oversight and the absence of sanctions as strong contributors to a wide range of corrupt practices (for an example, see GES 2018).

Broad range of potential measures

A large variety of mechanisms can support oversight, including supervision by line managers, internal and financial control systems, tracking systems, record keeping, audits, routine monitoring, unannounced inspection visits to health facilities, and even predictive modelling technologies that use algorithms to predict and flag suspicious activities (Jones et al. 2011).

Effective oversight - and effective health systems management more broadly - depends on decision-makers being able to see and understand what is happening at the point of service delivery. Therefore, information systems are an indispensable part of the strategies to strengthen top-down control (Lewis 2006). Besides routine data collection, operational research may also be required (WHO and World Bank 2017). As noted above, experience shows that making data and research findings that document the prevalence and negative impact of corruption publicly available can help to build support for reforms among diverse stakeholder groups and the wider population. This dynamic could be further strengthened through proactive media outreach (Bold et al. 2018). The adoption of freedom of information provisions and open data principles, for example within the framework of the Open Government Partnership, could add additional value. In addition, top-down accountability mechanisms are ideally supported by policies, procedures and processes that set clear boundaries and detail the disciplinary procedures to deal with suspected cases of rule-breaking (Kisakye et al. 2016). The range of possible sanctions includes formal cautions, loss of bonuses, fines, loss of the right to prescribe drugs, postponement of promotions, transfers, demotions, and termination of employment (Bloom et al. 2001, Kisakye et al. 2016).

One potential top-down control mechanism that does not seem to be widely used in the sector is the use of sting operations to entrap corrupt staff (Savedoff 2012, for an exception in Uganda see Marquette et al. 2019).

Evidence on impact

Experts broadly agree on three important points.

- First, strengthening oversight rarely reduces corruption unless it is accompanied by enforced sanctions.
- Second, strong oversight coupled with effective sanctions can significantly curb corruption and improve health outcomes.
- Third, even in the absence of sanctions, strong oversight mechanisms have important benefits that go far beyond curbing corruption.

The following section explores their findings and insights in greater depth.

Strengthening oversight in itself rarely reduces corruption

Although monitoring and audits alone have been found to curb corruption in some contexts (Lewis 2006), and evaluating the evidence base is complicated because studies evaluate different interventions in a variety of contexts (Zamboni et al. 2018), there is consensus that strengthening oversight is unlikely to significantly reduce corruption where employees face no sanctions if caught (Kisakye et al. 2016, Onwujekwe et al. 2018, Johnsøn et al. 2012, Tweheyo et al. 2017, Savedoff 2008, Lewis 2006).

Arguably, transparency is a necessary but not sufficient condition for achieving accountability (Bruckner 2011a). While an approach to manage corruption risks is only as good as its data (Johnsøn 2015), and inadequate monitoring systems can be a barrier to implementing anticorruption regulations (Kisakye et al. 2016), accountability without sanctions has been described as "meaningless" (Lewis 2006). Put differently, the risk of detection alone is usually not a sufficient deterrent if healthcare staff assume that being caught will entail no negative consequences.

Combining strong oversight with effective sanctions can significantly curb corruption

While corruption can never be completely eliminated from complex systems, combining strong oversight with sanctions with teeth can be a highly effective way to improve health outcomes. There is some empirical evidence to support this common-sense assumption.

For example, in Brazil, increasing the probability of being audited had no impact on healthcare service providers, while it substantially reduced corruption in procurement. Two factors suggest that sanctions explain the differential impact of audits in the different sectors. First, ironclad procedures and paper trails made corruption in procurement relatively easy to prove, while irregularities in service provision – such as absence during working hours – were hard to unambiguously link to criminal intent. Second, even if malfeasance by healthcare staff could be proven, they at the very worst risked only losing their jobs, while procurement staff risked losing their jobs, being fined, and being sent to jail (Zamboni et al. 2018).

Evidence from Uganda and Pakistan also points to the importance of sanctions in driving behaviour. In Uganda, a zero tolerance approach during building works at a hospital was successful at deterring theft, while absenteeism at the same institution continued unabated because, in keeping with local human resource management culture, supervisors turned a 'blind eye' to the widespread practice (Ackers et al. 2016). Similarly, the results of a large randomised controlled trial in Pakistan strongly suggested that doctors' responsiveness to absenteeism monitoring varied according to the level of political protection – and thus impunity – they enjoyed (Callen et al. 2016).

However, a widely cited experiment in India in which monitoring of nurse absenteeism was coupled with sanctions provides a cautionary tale. While the approach was initially highly effective, the health administration itself later deliberately undermined the sanctions system, rendering it ineffective (Banerjee et al. 2010).

Strong oversight can strengthen health systems and improve health outcomes

Even in the absence of sanctions, strong oversight mechanisms have important benefits in terms of strengthening health systems and improving health outcomes. The benefits of strong oversight mechanisms extend far beyond curbing corruption. As the WHO and World Bank have noted, "developing national capacity to design, operate, monitor and continuously adjust

the health system is essential for UHC to be achieved and sustained". (WHO and World Bank 2017). Effective oversight is a core feature of well-functioning healthcare systems, and as such directly contributes to improved health outcomes.

Conversely, much health system dysfunction can be linked to weak oversight. For example, Ugandan press reports have chronicled not only absenteeism and the illegal resale of medicines, but also instances of medical personnel being intoxicated on the job (Wojczewski et al. 2015). Five recent vaccine scandals in China also appear not to have involved corruption, but instead were attributed to "chaotic management, neglect of duties and regulatory failure" (Huang 2019), all hallmarks of weak oversight. None of these incidents involved corruption, but all of them appear likely to have adversely affected health outcomes.

The weakness of oversight in many health systems is also illustrated by persistent gaps in policy-relevant data. As this report has noted, both absenteeism and smallscale theft are widespread in many countries, and have a significant detrimental impact on health outcomes, but decision-makers and senior administrators often do not have reliable data on their prevalence or distribution, hindering the design of effective counter-measures (Ackers et al. 2016, Johnsøn 2015).

Often, such glaring information gaps are typical of national health systems as a whole. This limits the scope for evidence-based policy making, resulting in flawed programme designs and suboptimal resource allocations. Thus, regular monitoring is vital not only for curbing corruption, but for the efficient and effective functioning of the health sector as a whole. Decision-makers require accurate and up-to-date data generated by a wide range of diagnostic tools to quantify a wide range of problems, develop regulatory strategies, track the performance and impact of programmes, and make adjustments on an ongoing basis (Johnsøn 2015, Kisakye et al. 2016, Lewis 2006, UNDP 2011).

Implementation challenges

At the implementation stage, the size and complexity of healthcare systems and the wide range of tasks typically performed by health workers makes the rollout of oversight and sanctioning mechanisms highly challenging (Serneels et al. 2018), especially as corrupt staff may try to escape accountability by manipulating data (Ackers et al. 2016), bribing inspectors (Lewis 2006), influencing local officials (Ackers et al. 2016), and subverting fragile legal systems (UNDP 2011). Considering the difficulties of observing and monitoring a multitude of transactions and processes across the public health sector, it may be easier and more meaningful to instead monitor performance on health outcomes (Savedoff et al. 2016).

Prioritisation and integration into health system design and management

While it is indisputable that monitoring and other oversight systems are important, this still leaves open the question of how to set priorities among the many possible options. In addition to taking into account political constraints, opportunity costs, and limited capacities, it may help to distinguish between risk identification, risk assessment, and risk mitigation (Johnsøn 2015) goals.

For each measure chosen, it is then necessary to determine the optimal degree of oversight. Excessive oversight is not cost-effective, and can lead to inefficiencies and erode staff motivation (Serneels et al. 2018). For example, a rare study of audits of donor programmes as an instrument to reduce corruption (Hobbs 2005) concluded that the cost of comprehensive audits in every project would exceed the savings from such efforts (Johnsøn et al. 2012). A cost-benefit analysis of different oversight options and intensities for a resourcepoor health system is likely to yield different results than one conducted for the healthcare system of a high-income country.

In sum, irrespective of whether or not effective sanctions are in place, it seems advisable to avoid creating corruption-specific oversight mechanisms. Instead, efforts to strengthen oversight should be fully integrated into broader health system strengthening efforts, with the overarching aim of maximising improvements in health outcomes.

STRENGTHENING BOTTOM-UP ACCOUNTABILITY

Rationale

Strengthening the accountability of healthcare providers to the communities and patients they serve has frequently been proposed as a way to curb corruption at the service delivery level. In theory, citizens and patients form a constituency that has a strong vested interest in access to well-functioning local health services. In addition, their direct experience of using health services gives them considerable information on service performance, for example on whether staff are actually present during working hours, and whether essential medicines are available and are being provided in accordance with national policy. For these reasons, patient 'voice' is often seen as an integral part of effective health sector governance (for example, see WHO and World Bank 2017).

Policies to enhance community involvement as a way of strengthening demand-responsiveness and local accountability are becoming increasingly popular (Björkman et al. 2017). Strengthening bottom-up accountability appears especially attractive in contexts where there is little or no political will to curb corruption by putting into place strong top-down control measures and imposing sanctions, or where there is insufficient capacity for establishing effective central oversight across a large number of facilities and individual members of staff.

Strengthening accountability to individual patients

Some corrupt practices in healthcare service delivery are fuelled by patients' lack of awareness of processes, prices and entitlements. For example, as this report has documented, patients are sometimes unaware of which medicines and services are covered by public health insurance schemes, and cannot always distinguish between formal user fees and informal payments extracted by healthcare staff (for example, see Rao 2015).

In such situations, simply providing information to service users could have a beneficial effect.

For example, it has been suggested that making the price of health services public could curtail a wide range of corrupt payment practices in Nigeria (Onwujekwe et al. 2018). Similarly, requiring hospitals to make waiting lists public could reduce the practice of patients bribing doctors to jump ahead of the queue (Vian 2008).

However simple in theory, such transparency measures

are open to sabotage by staff if central oversight is weak. For example, staff could take down posters listing prices and entitlements.⁴ An additional obstacle is that while corruption undermines health outcomes overall, some patients can benefit strongly from some corrupt practices. For example, patients can use deception or bribes to get free or subsidised care they are not entitled to, obtain health certificates, avoid military service, or obtain disability payments (Savedoff et al. 2006). Where HIV treatment supplies are scarce, patients 'not quite bad enough' to qualify can bribe their way onto treatment programmes (Tayler et al. 2006), and according to one estimate, 1.6 million doses of antimalarials may be lost in Uganda every month due to deception by healthy service users seeking to stockpile drugs for future personal use (Kaheru 2010). Furthermore, the inherent power balance between providers and patients (Savedoff et al. 2006) could leave patients vulnerable to extortion even if they are fully aware of their entitlements.

In many high-income countries, patients' ability to sue healthcare facilities and individual staff for damages acts as an important corrective to the patient-provider power imbalance, notably in cases of malpractice. However, patient lawsuits are very rarely mentioned in the literature on corruption in low-income countries (only Wojczewski et al. 2015 mentions such cases in passing), presumably because legal systems in many low-income countries are often dysfunctional, largely inaccessible to the poor, and prone to deliver verdicts that favour the party with more political and financial clout (for an excellent discussion, see Lieven 2012).

Strengthening accountability through community monitoring

Individual patients generally lack the organisation and power to discipline healthcare providers (Savedoff et al. 2006). Therefore, most bottom-up accountability interventions have attempted to form or engage community groups to hold providers accountable for their performance or outcomes achieved.

Many such attempts are loosely based on the Community Driven Development model currently fashionable in international development, which involves mobilising citizens into community groups around local development objectives. A key rationale of this approach, while rarely explicitly stated, is to bypass dysfunctional or corrupt state structures. Over the past decade, the World Bank alone has allocated close to US\$85 billion to local participatory development programmes, but a comprehensive review found little evidence supporting their effectiveness (Björkman et al. 2017). Some critics see them as little more than donor-driven 'astro-turfing' (Barder 2010), a term

⁴ For example, a large-scale, donor-funded, social infrastructure programme in Georgia required community-based organisations to publicly display their project budgets so all local residents could see them. Inspection visits showed that such budgets had sometimes been removed, or never been put up in the first place. Personal experience of the author, WGCMI programme, 2002.

usually used to describe fake, grassroots groups created by corporations to promote their interests at arms' length.

Inconclusive evidence on impact of community monitoring

The available evidence of the impact of community monitoring on reducing absenteeism, informal payments, and other forms of corruption, and on improving service delivery by local health and education providers in general, is mixed. The literature chronicles both successful and unsuccessful interventions (for useful overviews see Lewis 2006, Vian 2008, Vian 2015, Björkman et al. 2017, Onwujekwe et al. 2018, Iles 2019; for interesting case studies see Banerjee et al. 2010 and Olken 2007). In some cases, groups set up to monitor healthcare providers have been completely dysfunctional, or have actively engaged in the theft of medicines (Lewis 2006). Whether these mixed findings are driven by differences in the details of the interventions or context is difficult to disentangle (Björkman et al. 2017).

A large-scale, randomised control trial in rural Uganda, discussed below, illustrates the potential of well-designed community monitoring approaches in the health sector, and points to possible critical success factors (Björkman et al. 2017).

Community monitoring successes and failures in Uganda

A research project initiated in 2004 conducted two waves of randomised controlled trials covering 75 rural communities served by a public primary health facility across Uganda. By law, all health services offered by the facilities were free of charge. Facilities only received infrequent supervisory visits from government bodies. Baseline data revealed absenteeism rates of around 50%.

In the first wave, 50 communities were selected, with half forming a control group. The project first reviewed facility records and collected data through a survey of around 5,000 households, and used this information to create report cards showing facility performance in terms of utilization, access, absenteeism, and patient-clinician interactions in comparison to other health facilities and the national standard for primary healthcare provision. The project then convened and facilitated a series of meetings in the 25 intervention communities in which members of each community and health facility staff were encouraged to develop and agree on a joint action plan for improving health services. After the initial meetings, the communities themselves had the responsibility to monitor the implementation of the plan. The remaining 25 communities received no treatment, and thus formed the control group.

Facilities in mobilised communities did not receive more drugs or funding from external sources than those in the control group, and the level of supervision of by government authorities remained unchanged.

The results were impressive. A short-term evaluation after one year documented strong improvements on a variety of measures in the

intervention group, including a 32% reduction in infant mortality and a 20% increase in outpatients served relative to the control group. A longerterm evaluation conducted more than four years later equally showed sustained improvements in numerous health outcomes despite minimal follow-up in the intervening time, including a 28% reduction in infant mortality.

In the later second wave, 25 communities were added to the project. Half of them developed action plans using an identical process, but did not receive any data on local performance. A short-term evaluation found no improvements whatsoever in either quality of care or health outcomes.

The authors of the study provide evidence to suggest that the striking impact achieved by supplying baseline performance data was due to participants being able to use this data to identify numerous steps that could be taken locally to improve healthcare provision. In contrast, the groups without access to facility-specific performance data predominantly focused on potential solutions led by external players, such as the national government.

Importantly, the impact achieved relied entirely on "informal forms of social recognition and/or social opprobrium," as community members had no formal means of rewarding or sanctioning healthcare staff. The study team concluded that:

"Within reasonable bounds, it is possible that non-financial rewards (social recognition) may be just as effective at eliciting effort as financial incentives... [A]ssembling and disseminating relevant information is crucial in programs designed to strengthen local control and oversight as it enables citizens to focus on actionable tasks." While resource-intensive, the approach used appeared to be cost-effective in terms of improving health outcomes. Only judged on the cost per death averted, it cost US\$278 to avert the death of a child, around a third of the average price tag of other commonly used health interventions. The study authors note that baseline data collection through community groups or through electronic means could further decrease costs. (Björkman et al. 2017)

Note that while the impressive methodological quality, scale and time horizon lend considerable weight to the findings of the above study, it remains completely unclear to what degree these findings are generalizable. The informal social dynamics in rural Uganda that appear to underpin the intervention's success may play out completely differently in other countries, or indeed in Ugandan cities.

However, the study's findings do disprove the sweeping assertion that "[t]he centralized hiring, promotion and deployment of public health workers in all countries effectively neutralizes the role of local supervision," and that local residents cannot influence "service delivery responsiveness and access" due to their lack of formal sanctioning power vis-à-vis providers (Lewis 2006). At least in some contexts, this is clearly not the case. The study arguably also disproves the assumption (Barder 2010) that groups created through donor 'astro-turfing' cannot foster meaningful local accountability.

STRENGTHENING STAFF MORALE AND MOTIVATION

Rationale

Corruption only occurs if and when people decide to engage in corrupt practices. The available evidence suggests that strengthening staff morale and motivation could reduce corruption and improve health outcomes. Several possible ways of doing this are discussed below:

- Raising salaries
- Providing financial incentives
- Non-financial measures to improve staff morale and motivation

Raising salaries

In health systems where corruption is widespread, healthcare service providers themselves routinely identify unsatisfactory financial compensation as the leading driver of corrupt behaviour in general, and of absenteeism and the small-scale theft of medicines in particular. It is therefore unsurprising that raising salaries has repeatedly been proposed as a way of reducing corruption in the sector. While the evidence regarding this is complicated and not straightforward (Lewis 2006), on balance it indicates that raising salaries by itself does not reduce corruption (Johnsøn et al. 2012).

Research into the link between salary and corruption levels within countries supports this view. For example, one study found that Indian public employees who lived in poorer states where the cost of living was lower actually displayed higher levels of absenteeism, despite being paid at a national fixed rate (Chaudhury et al. 2006). Also, against a constant baseline of low public sector pay, there are considerable variations in absenteeism levels by employees in the healthcare, education and industrial sectors (Chaudhury et al. 2006), as well as between different facilities and individuals within the healthcare sector.

Very large pay rises might in and of themselves reduce corruption, but the evidence is not conclusive, and in any case few countries could afford them (Gaal et al 2010). Firing large numbers of staff and paying those remaining decent salaries could solve the affordability problem (Lewis 2006), as was done successfully in many parts of Georgia's public sector (World Bank 2012), but it is unclear whether such a move would result in better health outcomes, and in most contexts is unlikely to be politically feasible.

Interestingly, there is some anecdotal evidence to suggest that corruption levels could sometimes be reduced simply by ensuring that employees receive their pay on time (Tweheyo et al. 2017), and criminological theory supports this contention. However, while intuitively appealing, this potential low-cost policy fix may be surprisingly difficult to implement in some contexts. A study in Nigeria found that staff were often paid late or not at all regardless of whether the public bodies employing them received their budget allocations on time or not (Vian 2008).

In sum, historical experience (Stepurko et al, no date) and some contemporary studies do suggest that raising salaries can be effective in reducing corruption levels – but only if and when this is accompanied by effective monitoring and sanctions (Lewis 2006, Savedoff 2008, Savedoff et al. 2008, UNDP 2011). Salary increases coupled with effective monitoring and sanctions should be considered for inclusion in any anticorruption agenda, as should measures to ensure the timely payment of salaries, but higher pay in and of itself should under no circumstances be assumed to curb corruption or improve health outcomes (Di Tella et al. 2000).

Providing financial incentives

Several observers have suggested that tying pay to performance could reduce corruption in general, and absenteeism in particular. If 'money follows patients', providers would be incentivised to turn up for work and work harder (Lewis 2006, Savedoff 2007). One study in Cambodia found that pay for performance mechanisms linking health worker bonuses to facility performance increased guality, boosted utilization, and reduced the incidence of informal payments (Michaud et al. 2015). In China, some health facilities awarded prizes for "honest medical service" and financial rewards to health workers who refused informal payments (Bloom et al. 2001), but the impact of these measures is not documented. Some observers have suggested that performancelinked increases in pay may have greater impact on staff behaviour than a one-off boost in base salaries (Gaal et al 2010).

On the downside, pay-by-performance systems on the individual or facility (Michaud et al. 2015) level can undermine service quality if staff rapidly 'tick boxes' to maximise revenues. They also create incentives to overcharge for services, bill for services not provided, perform unnecessary or unnecessarily expensive tests and treatments (Bloom et al. 2001, NYT 2009, Savedoff 2007), and manipulate performance data. A review of the literature on the effect of compensation schemes across OECD countries lends credence to these concerns. It concluded that while physicians who were paid fixed salaries were less productive and provided lower levels of care, salaried doctors did facilitate cost control (Lewis 2006). Meanwhile, the evidence on whether permanent salary-based employment (which increases job security but arguably disincentivises effort) leads to better performance in lower-income country settings is contradictory, with different studies documenting opposite impacts on absenteeism rates (Kisakye et al. 2016).

If the aim is to reduce absenteeism, financial incentives might only be effective if they outweigh the financial benefits of moonlighting (Kisakye et al. 2016), which may be considerable. For example, a surgeon in Uganda can earn threefold his public salary in private practice (Bouchard et al. 2012).

In terms of feasibility, many high-income countries tie pay to performance, but the monitoring systems required may be too complicated and costly to implement in less resource-rich settings. In contrast to the education sector, where teachers perform a comparatively uniform set of tasks and student test scores provide a useful single outcome measure, developing meaningful activity-based or outcome-based performance indicators for the health sector is difficult (Serneels et al. 2018).

In sum, introducing pay-for-performance will change corruption patterns, but does not necessarily reduce overall corruption levels (Savedoff 2007). Its impact on health outcomes can be positive or negative, depending on context, design and implementation.

Using non-financial measures to improve staff morale and motivation

Despite the near-complete absence of effective monitoring and sanctions observed in the public healthcare sectors of many countries, some people do still show up for work, and some medicines do not get stolen. This paradox highlights that there are important non-financial motivations that can significantly affect the behaviour of healthcare providers (Chaudhury et al. 2006). Experience from high-income countries indicates that peer-group pressure can reduce fraud (Jones et al. 2011), and that workplace norms may influence absenteeism rates (Davey et al. 2009). Similarly, research in lower-income countries strongly suggests that social-cultural factors play a significant role in shaping healthcare workers' behaviour (Tweheyo et al. 2017).

In the anthropological literature reviewed, it is striking how often healthcare workers in low-income countries report feeling badly or disrespectfully treated by superiors, and express strong dissatisfaction with working conditions, including badly maintained facilities and staff living quarters. Criminological theory strongly suggests that such dissatisfaction is likely to increase corrupt behaviours, but there is an absence of data to support or refute this assumption. One cautionary finding is that standard anticorruption measures such as increased monitoring and curtailing autonomy may backfire as they can erode employee satisfaction (Bold et al. 2018, Serneels et al. 2018).

Improving physical conditions in clinics and staff quarters seems highly likely to improve employee morale and hence reduce corruption irrespective of context (Lewis 2006), but further research is required to determine whether, taking into account opportunity costs, the investment required would pay sufficient dividends in terms of improving health outcomes.

An interesting approach reported from China was to ask patients and doctors alike to sign pledges not to pay or accept 'gifts' (Bloom et al. 2001), but whether this has had any impact is unknown. Also interesting are studies indicating that different personality types may respond to different types of interventions, but the evidence base remains patchy (Hanna et al. 2018, see also Tweheyo et al. 2017), and it is doubtful that interventions tailored to individual profiles could be operationalised in low-resource settings.

Working through doctors' organisations like medical councils to strengthen professional norms may have intuitive appeal, but such bodies have frequently been observed to place their fellow doctors' interests above those of patients and society at large (Gornall 2015, Rao 2015, Sachan 2013).

One important factor to keep in mind is the example set by superiors: if the minister of health and senior officials are known to engage in large-scale corruption, low-level healthcare providers will find it far easier to internally rationalise and externally justify abusing their public positions for private gain too.

In sum, social norms and expectations, peer pressure and professional pride are clearly important factors (Bloom et al. 2001, Chaudhury et al. 2006), but it is not clear how the design and implementation of healthcare programmes can leverage these dynamics to curb corruption, especially as they are likely to be highly context-specific. A possible exception is to preferentially locate healthcare staff within their own hometowns, which has linked to lower rates of absenteeism in some contexts, presumably due to stronger social pressure to deliver services (Yamada et al. 2013).

Where the workforce is predominantly female, policy makers could also explore whether providing childcare services (Tweheyo et al. 2017) or making working hours more family-friendly might reduce absenteeism. Improving management practices may also warrant further investigation; while not an anticorruption measure per se, as one study has indicated positive effects on outcomes even in highly corrupt environments (Bold et al. 2018). Low-cost measures such as conducting ceremonies to praise teams with good attendance records, as is done in the UK (Kisakye et al. 2016), certainly merit consideration.



ANTICORRUPTION WITHIN DONOR PROGRAMMES

Rationale

Donors spend over US\$20 billion a year trying to improve global health (Savedoff et al. 2016), and in low income countries, health expenditure by donors typically exceeds that of national governments. Foreign aid plays an especially prominent role in efforts to combat HIV/ AIDS, malaria and tuberculosis (WHO 2018b). Therefore, effectively curbing corruption within donors' aid portfolios could substantially improve health outcomes for some of the world's poorest and most vulnerable inhabitants.

Corruption control and aid effectiveness

In the 2005 Paris Declaration on Aid Effectiveness, donors pledged to increasingly work through host country systems and "[a]void, to the maximum extent possible, creating dedicated structures for day-to-day management and implementation of aid-financed projects and programmes" (OCED/DAC 2005). The declaration came in the wake of criticisms that donors were failing to strengthen aid recipient counties' national systems by delivering aid through stand-alone structures with high overheads that lacked long-term sustainability (for example, see Easterly et al. 2012). A recent paper by the WHO and World Bank reflects this aid effectiveness agenda:

"Importantly, donors must gradually shift away from channelling funds through separate and short-term financing and implementation arrangements towards the development and use of national institutions responsible for sustainable financing of the health sector. The scale of this challenge is non-trivial: in 2013, investments in disease-specific programmes constituted more than 90 per cent of development assistance for health." (WHO and World Bank 2017)

Critics argue that working through host country systems can actually be less effective if these are highly corrupt:

"When [the U.S. government] encounters a problem with public-sector drug distributors... it completely bypasses the troublesome actor — in this case the Angolan government — and looks for other private distribution networks, including direct handoffs from U.S. contractors to in-country clinics. The global health community doesn't approve of this approach, however, suggesting that it wastes funds that could in principle be used to treat more people. Perhaps, but it's indisputable that the drugs at least get to where they're supposed to go." (Bate 2011b)

In practice, corruption levels as perceived by donors

often influence how foreign assistance is structured (Savedoff et al. 2016). Where the level of corruption is considered acceptably low, donors sometimes disburse funds directly to governments as budget support. Further up the corruption scale, donors may set up a project implementation unit nominally located within the public sector, but de facto largely controlled by the donor, or use independent contractors to manage last-mile delivery (UNDP 2011). In highly corrupt environments, donors tend to completely bypass governments and subcontract aid delivery to NGOs and private contractors (Bate 2011a).

In this context, it is interesting to note that health aid is believed to have been effective in driving improved outcomes for poor people, and thus is widely regarded as a "success story" even by aid critics (Savedoff et al. 2016). At the same time, compared to aid for other sectors, an unusually high proportion of health aid has been channelled through exactly the kind of vertical standalone programmes criticised as ineffective by proponents of the aid effectiveness and country ownership agendas. Whether aid to the health sector is remarkably effective because it often bypasses host governments, or despite the fact that it often bypasses governments, is unclear.

Note that this is an empirical question, not an ideological one. Only reliable estimates of the expected costs of corruption (plus overheads and waste) in the system of both the host governments and the donor could allow aid providers to determine which implementation approach is most effective at improving health outcomes in a given context. However, reliable estimates are unavailable not only for host government systems, but also for donors' internal systems.

Estimating the scale of corruption in donorfunded programmes

The best available attempt to quantify the true extent of corruption in an aid programme comes from a now-classic study (Olken 2007) of a World Bank financed programme implemented by the Indonesian government. The study used core samples taken from roads to gauge the quantity of materials actually used, surveyed local suppliers to estimate prices, and interviewed villagers to determine the wages paid on the projects. It found that the gap between reported expenditures and estimated actual expenditures, i.e. the proportion presumably lost to corruption, was 24%.

The study found that even when local implementers were informed in advance that they would be audited, the gap remained close to 20% because "in the vast majority of cases the auditors' findings were procedural in nature" and unsuited to producing evidence of criminal malfeasance (Olken 2007; for a case study documenting the failure of auditing to detect corruption see Vian 2013). Another detailed snapshot is provided in an exceptionally thorough internal World Bank review of health programmes in India (World Bank Group 2007). It found that out of 55 hospitals built or refurbished in Orissa, 54 had "construction problems" that in many cases appeared to be linked to corruption. The review detected possible signs of fraud in nine out of twelve related procurement processes. Poor-quality materials and work were estimated to shorten the useful lives of the buildings constructed by as much as 50–75%. The review's cover page warned that it was "a strictly confidential internal World Bank document," and that it findings "should not be used by the Government of India as the basis for initiating any administrative, criminal, or civil proceeding," or even be cited during any independently initiated proceedings.

Even though aid programmes funded by donors are often implemented in contexts characterised by high corruption levels, donor publications routinely suggest that their programmes are free of corruption to a remarkable degree. For example, in 2011 the UK's National Audit Office issued a report on the financial management of the Department For International Development (DFID), the country's bilateral donor agency, noting that the value of fraud and corruption reported in DFID's accounts amounted to just 0.01% of its overall expenditure (ICAI 2011).

DFID reported detecting US\$600,000 lost to corruption at a time when it was providing over US\$915 million in budget support alone (ICAI 2011), including to countries perceived to have high levels of corruption such as Pakistan and Sierra Leone (TI 2011). The sum 'officially' lost to corruption across all of DFID's global programmes is less than the amount defrauded from the UK's National Health Service by a single locksmith working at a London hospital (Heaton 2019). The National Audit Office concluded that "The Department is too reactive and cannot provide Parliament and the taxpayer with a clear picture of the extent, nature and impact of leakage" (NAO 2011). Like other donors, DFID had no systematic or comprehensive approach to quantifying the extent of corruption within its programmes (ICAI 2011).

Without studies that precisely quantify losses due to corruption (a prime example is Olken 2007), it will remain impossible to estimate what proportion of the over US\$20 billion a year in donor health aid are lost to corruption, let alone the proportion of funds lost to corruption specifically at the healthcare service delivery level. However, it seems safe to assume that it exceeds 0.01% by several orders of magnitude.

Anticorruption safeguards within donor agencies

This report has repeatedly argued that anticorruption efforts need to take account the opportunities and constraints generated by the wider environment in which they occur in order to be successful. This principle applies to donor programmes just as it does to national health systems.

Donor agencies have few institutional incentives to quantify corruption within their assistance portfolios because doing so publicly would invite attacks by domestic stakeholders who are either ideologically hostile to foreign aid, or unwilling to accept any level of corruption within aid programmes. Instead, donors engage in "organized hypocrisy" (Hobbs 2005) or "phantom accountability" (Bruckner 2011b), characterised by the adoption of procedural safeguards (Savedoff et al. 2016) and compliance-based approaches whose primary purpose is to serve as "reputational armour" (Bauhoff et al. 2018) against possible attacks. Thus, donors rarely if ever engage in proactive, preventative investigations focusing on a randomly selected sample of grants even though this approach could provide a more robust estimate of corruption and waste (Michaud et al. 2015).

This dynamic contrasts sharply with health programmes within donor countries, where such approaches are regularly applied and generate copious data on, and hence evidence of, widespread waste and corruption (Michaud et al. 2015), without threatening the funding of these programmes. The difference is due to strong and consistent support for domestic health programmes based on widespread public recognition of their positive overall impact (Savedoff et al. 2016), and the presence of effective watchdog organisations who can directly communicate their findings to taxpayers, service users and voters (Bruckner 2011b), which makes it impossible to not tackle corruption and waste.

As donors lack insight into the patterns, prevalence and scale of corruption in their portfolios, they cannot reliably assess corruption risks and focus on curbing those types of corruption that pose the greatest threat to health outcome objectives. The result is an ad hoc approach (Michaud et al. 2015), whereby anticorruption efforts are implemented with weak evidence that they reduce corruption, and little attention as to whether they reduce the effectiveness of health aid overall (Savedoff et al. 2016). Risk management strategies are rudimentary, focus excessively on internal fiduciary risks, are front-loaded, and fail to distinguish between risk identification, assessment, and mitigation (Johnsøn 2015). Mitigation efforts tend to add controls and compliance-based measures added onto programmes rather than reducing corruption risk through better programme design, focus on preventing corruption that is highly visible rather than corruption that is chronic and could pose substantial harm to beneficiaries, ignore

actors' incentives and key institutional features, and do not include tuned detection mechanisms (Bauhoff et al. 2018).

Evidence on donor performance in protecting aid against corruption is sparse. A review of relevant evaluations highlighted that they did not examine the effectiveness of different types of interventions, and thus offered few insights into what works and what does not. It also found that evidence of the impact of fiduciary risk assessments on reducing corruption was very limited, and noted the contrast between positive evaluations of bilateral programmes and more critical evaluations of World Bank efforts. The single study examining the role of aid programme audits as an instrument to reduce corruption concluded that the cost of comprehensive audits in every project would exceed the savings from such efforts. The review concluded that: "Overall, the evidence for the impact of donors' internal processes on reducing corruption is weak" (Johnsøn et al. 2012, see also Kenny 2017).

RECOMMENDATIONS

This report has documented in detail how corruption in healthcare service delivery substantially undermines efforts to attain the Sustainable Development Goals and achieve UHC. It has outlined some general principles of anti-corruption in the sector, and discussed a number of specific anti-corruption measures in detail. At the same time, it has noted that many of the current approaches to anti-corruption in the sector lack effectiveness.

Achieving UHC requires decision-makers to move beyond the ineffectual ad hoc approaches that have characterised most anti-corruption efforts in the sector so far. This report concludes with eight recommendations on how to improve health outcomes by effectively curbing corruption in healthcare service delivery.

1. Increase funding for policy-relevant research

There are currently large gaps in the evidence base on corruption and anti-corruption. This report has flagged many excellent research projects that have yielded policy relevant insights, but as patterns of corruption tend to vary strongly from one country to the next, such insights cannot reliably inform the design of anti-corruption efforts beyond their original context. There is a strong need for adequately funded research on a country-by-country basis to determine which types of corruption in healthcare service delivery are most harmful to health outcomes, and how they can most effectively be curbed. In particular, there seems to be a scarcity of empirical research that incorporates qualitative explorations of positive and negative outliers within the study population. Annex I provides a tentative list of open research questions.

Donors spend over US\$20 billion in health aid every year, and available evidence suggests that a non-trivial share of these resources is lost to corruption. In this context, allocating more funding to research geared towards providing actionable recommendations on how the impact of health aid can be improved seems likely to deliver strong returns on investment. Developing research templates that involve repeated re-assessments over long time periods, and that yield comparative data across multiple countries, may add further value.

2. Take political and bureaucratic constraints into account

In healthcare as in other sectors, corruption at the service delivery level is typically rooted in deeper systemic problems. In many countries, powerful players have a strong vested interest in perpetuating corruption. Similarly, in many donor agencies, senior decision-makers have a strong bureaucratic interest in not detecting or effectively tackling corruption within their portfolios. Anti-corruption efforts that do not take these realities and the resulting constraints into account are likely to replicate the overall disappointing track record of their predecessors.

3. Integrate health systems governance into overall health system strengthening

As the WHO has pointed out, strong health systems governance is an integral part of well-functioning health systems that deliver good health outcomes. In this context, it makes sense to fully integrate anti-corruption approaches into wider efforts to strengthen health systems. This can be done by routinely conducting corruption risk analyses as part of wider sector situation analyses, using these analyses to prioritise which risks to address, and integrating strategic objectives on addressing corruption risks into the final plans and strategies.

4. Prevention is better than cure

Designing health systems and programmes to reduce incentives and opportunities for corruption from the outset is likely to be far more effective and cost-effective than trying to implement stand-alone anti-corruption measures that work against the grain of structurally flawed systems. Anti-corruption experts should be fully involved in the assessment and design of systems and programmes from the outset.

5. Prioritise curbing the most damaging forms of corruption

Often, the normatively laden discourse around corruption obscures the fact that some forms of corruption are far more damaging than others. The existing literature flags numerous appropriate methodologies, notably portfolio estimates and risk-based approaches, for identifying these forms. Anti-corruption resources are limited, and thus should be directed at those forms of corruption that are most damaging in terms of undermining health outcomes, i.e. the outcomes most meaningful to patients and citizens, and where anti-corruption efforts have a realistic probability of success considering political and other constraints.

6. Combine different approaches

Isolated anti-corruption approaches are unlikely to yield strong results. For example, as this report has documented, top-down monitoring or bottom-up accountability measures rarely reduce corruption levels unless sanctions are also put into place. Note that the optimal mixture, combination and sequencing of different approaches is likely to be highly context-dependent.

7. Information is essential

Monitoring data and other information are required to determine whether and how well anti-corruption efforts are working, to detect and respond to emerging new challenges, and to improve health outcomes. As effective health system management in general requires reliable and timely data, the collection and analysis of data for anti-corruption purposes could be fully integrated into overall monitoring and management information systems. Information technologies are making the process of collecting data easier and cheaper, and should be leveraged wherever appropriate.

8. Shift the focus from formalistic approaches to health outcomes

Experience indicates that paper-based compliance and audit approaches commonly used by donors are not well suited to detecting or deterring corruption, while placing a large administrative burden on donor agencies, grantees, and host governments. In some cases, such red tape could be reduced without resulting in an increase in corruption levels. Resources devoted to checking whether numbers add up on paper could be reallocated to monitoring and evaluating whether health outcomes are being achieved on the ground. The growing literature on results-based donor financing outlines possible ways to combine curbing corruption with increasing its effectiveness and impact.

ANNEX I: J-PAL LIST OF UNRESOLVED RESEARCH QUESTIONS

In the course of conducting an extensive review of the "empirically rigorous evidence on governance issues in low-income countries", the Abdul Latif Jameel Poverty Action Lab (J-PAL) in 2011 compiled a long list of unresolved questions related to the topic that required further research (Olken et al. 2011).

Questions relevant to curbing corruption in healthcare service delivery were extracted from that list, and are reproduced below.

- How does the institutional structure of community monitoring determine its impact on policy? What are the channels of influence?
- Are some programs and policies more amenable to being monitored by the community vs. others?
- What prevents corrupt officials and political leaders from extracting even larger amounts?
- Are some government functions or programs more susceptible to leakages, and if so, why?
- Do higher wages reduce corruption? If so, is it due to selection effects, efficiency wages, or because honesty is a normal good?
- When are government enforcers (auditors, police, prosecutors, anti-corruption staff) effective at reducing corruption, and when do they themselves become corrupt and only add to the problem?
- Are there multiple equilibria in corruption due to differing circumstances? If so, what causes these, and can temporary corruption crackdowns have permanent effects?
- Can output-based incentives for government officials reduce corruption, or will they lead to overenforcement and extortion?
- What are the possible selection and promotion criteria to reduce the propensity of civil servants to be corrupt?
- How can community-monitoring programs be designed to be more effective in monitoring civil servants? Why do they work in some cases but not others?

- Can changing the structure of the bureaucracy to encourage competition between government officials lower bribes?
- What types of information releases are more effective in reducing leakages?
- How can clean governance and anti-corruption values be made intrinsic among civil servants?
- Does corruption cause governments to re-optimize expenditures? If so, do governments shift into lower corruption sectors (to avoid distortions) or higher corruption sectors (to maximize rents)?
- Does the nature of corruption and its impact vary across different socioeconomic groups?
- Can non-financial motivations, such as shame, intrinsic motivation, and mechanisms to internalize the greater good reduce corruption?
- Can using technology to reduce the discretion of government agents reduce corruption?
- Can using technology as a monitoring tool reduce corruption?
- Can using technology as an information sharing tool reduce corruption?
- Does transparency encourage government officials to be less corrupt?
- Does transparency enable citizens to monitor more effectively?
- What types of information releases are more effective in reducing leakages?
- How can the impacts of anti-corruption programs be made to persist?

ANNEX II: ANNOTATED BIBLIOGRAPHY

Ackers et al. 2016. The impact of delays on maternal and neonatal outcomes in Ugandan public health facilities: the role of absenteeism

Concludes that "the single most important factor contributing to delays and associated adverse outcomes for mothers and babies in Uganda is the failure of doctors to be present at work during contracted hours".

Ackers et al. 2018. Maternal Mortality in Low Resource Settings: Are Doctors Part of the Solution or cpake

Argues that "health worker absenteeism lies at the heart of" high maternal mortality rates in Uganda. Suggests that donors "should focus on providing support with and enforcement of effective human resource management and accountability systems as a non-negotiable conditionality principle."

Al Jazeera. 2010. The killing season: Uganda's last defence against malaria is being threatened by a growing black market

Media report on the deadly consequences of malaria drug thefts, including patient deaths and drug resistance.

Allin et al. 2006. Paying for 'free' health care: The conundrum of informal payments in post-communist Europe

Discusses the causes, scale and consequences of corruption in CEE, and discusses possible counter-measures. Cites numerous studies on scale and prevalence of corruption in individual countries, and discusses social, psychological and anthropological factors.

Altaf. 2011. So Much Aid, So Little Development: Stories from Pakistan

Book by public health expert tracing a large-scale World Bank health programme in Pakistan over several years. Documents how ignorance of local realities, ill-informed programme design, skewed incentives, and misplaced priorities resulted in weak implementation and disappointing health outcomes.

Associated Press. 2019. AP Investigation: Congo hospitals openly imprison patients

Documents Congolese hospitals' widespread and illegal practice of detaining patients who are unable to pay for treatments received. Quotes several doctors and patients.

Akwataghibe et al. 2012. Assessing health workers' revenues and coping strategies in Nigeria — a mixed-methods study

Examines the coping mechanisms of health workers in Nigeria to supplement their salaries and benefits. Documents both "predatory and non-predatory mechanisms".

Balabanova et al. 2002. Understanding informal payments for health care: The example of Bulgaria

Estimates the scale and determinants of informal payments in the health sector of Bulgaria and who benefits, the characteristics of payments, and the reasons for paying. Based on large-scale survey and focus groups. Finds that informal payments are relatively common in Bulgaria, and that social acceptance varies strongly depending on context.

Banerjee et al. 2010. Putting a band-aid on a corpse: Incentives for nurses in the Indian public health care system

Chronicles the fate of an experimental monitoring and sanctions system in India. It was initially highly successful at reducing absenteeism, but was later rendered completely ineffective by changes made by the local health administration.

Barder. 2010. Development 3.0: is social accountability the answer?

Argues that there is increasingly good evidence that transparency and accountability make a significant difference, but warns [in comment section] that "astroturf grass roots movements conjured up by top down donor interventions... are unlikely to succeed".

Bate. 2011a. Partners in crime: National theft of Global Fund medicines

Argues that millions of dollars of donated antimalarial drugs have been stolen, most often by staff of recipient government medical stores. Accuses the Global Fund and other donors of turning a blind eye to corruption. Explores possible counter-measures.

Bate. 2011b. Africa's epidemic of disappearing medicine

Discusses antimalarial drug thefts in Togo and criticises Global Fund responding inadequately. Flags problems related to using country systems in corrupt nations. Suggests US should reduce or cut funding to Global Fund.

Bate et al. 2018. Corruption and medicine quality in Latin America: A pilot study

Based on assessment of the quality of 687 antibiotic samples from ten countries in Latin America. Concludes that "corruption is a key predictor of poor quality drugs".

Bauhoff et al. 2018. Rethinking corruption risk management for global health programmes

Argues that many common mitigation efforts have significant limitations, and that forensic economics, enterprise risk management, and risk assessments would work better. Proposes mainstreaming anti-corruption approaches into programme design from the outset.

Belita et al. 2013. Absenteeism amongst health workers: Developing a typology to support empiric work in low-income countries and characterizing reported associations

Systematic review of the literature on absenteeism in both rich and poor countries. Develops a typological framework for defining absenteeism.

Bloom et al. 2001. How health workers earn a living in China

Discusses how the transition from communism affects healthcare in China, with a focus on informal practices and state control efforts.

Bold et al. 2018. Clientelism in the public sector: Why public service reforms fail and what to do about it

Reviews the literature on successes and failures of both top-down and bottom-up reform efforts. Argues that the reforms with most potential for success pay careful attention to the power constraints that are in place.

Bouchard et al. 2012. Corruption in the health care sector: A barrier to access of orthopaedic care and medical devices in Uganda

Case study based on interviews with healthcare providers and patients. Interviewees flagged misappropriation of funds, theft of equipment, resale of drugs and medical devices, fraud and absenteeism as access barriers. Concludes that "perceived corruption [is] a significant barrier to access."

Bruckner. 2011a. Monitoring post-war international aid to Georgia: Personal reflections on the experiences of Transparency International Georgia

Concludes that without a multitude of motivated, capable and sufficiently funded intermediary institutions on the ground, it is extremely difficult to meaningfully translate the information on aid supplied by international donors into formats that meet local demand for information on aid.

Bruckner 2011b. Accountability in International Aid - The Case of Georgia

PhD thesis examining the influence of power and accountability relationships on the design and delivery of post-war aid to Georgia 2008-2009. Concludes that aid providers are primarily accountable to stakeholders with little interest in making aid more effective.

Callen et al. 2016. The Political Economy of Public Sector Absence: Experimental Evidence from Pakistan Large-scale randomised controlled trial in Pakistan. Doctors connected to politicians and those working in uncompetitive constituencies were more often absent from work. The success of two experimental interventions aimed at reducing absenteeism depended largely on the local political context.

Chaudhury et al. 2006. Missing in action: Teacher and health worker absence in developing countries Landmark study based on two visits each to 100 health clinics each in Bangladesh, Ecuador, India, Indonesia, Peru and Uganda to record absenteeism. Averaging across the countries, 35 percent of health workers were absent. In India, the survey was designed to be representative in each of 20 states, which together account for 98 percent of India's population. Explores correlates and possible policy solutions.

Chene. 2005. Zimbabwe: Overview of corruption in the health and education sectors and in local governments Overview of forms of corruption and their impact.

Chereches et al. 2013. Defining informal payments in healthcare: A systematic review Reviews various definitions of informal payments used in the literature.

Ciccone et al. 2014. Linking governance mechanisms to health outcomes: A review of the literature in low- and middleincome countries

Review of the empirical literature linking governance mechanisms to health outcomes in LMICs. Only found 30 publications total, few of which included corruption as a variable.

Collignon et al. 2015. Antimicrobial Resistance: The Major Contribution of Poor Governance and Corruption to This Growing Problem

Analysis of data from 28 European countries. Finds that national corruption levels strongly correlate to AMR, challenging the general perception that antimicrobial resistance is predominantly linked to just poverty and antimicrobial usage in people.

Couffinhal et al. 2017. Wasting with intention: Fraud, abuse, corruption and other integrity violations in the health sector *Discusses corruption in OECD countries, and a range of counter-measures adopted.*

Davey et al. 2009. Predictors of nurse absenteeism in hospitals: A systematic review

Review of studies set in developed countries finds that individual nurses' prior attendance records, work attitudes (job satisfaction, organizational commitment and work/job involvement) and 'retention factors' reduced nurse absenteeism, whereas burnout and job stress increased absenteeism.

Demming. 2017. The disease of corruption: How distrust in corrupt governments impacts emergency health delivery Blog arguing that effective Ebola response in West Africa was hampered by citizen and donor distrust of the government due to high perceived corruption levels.

Derose et al. 2009. Social capital and health care access: A systematic review

Systematic review of 21 studies of social capital and health care access, 18 of these set in OECD countries. Concludes that "it would be nearly impossible to compare any one of these studies with another and expunge a common measure to discuss social capital as a cause of common outcomes."

Di Tella et al. 2000. The Role of Wages and Auditing during a Crackdown on Corruption in the City of Buenos Aires

Widely cited study of the prices paid for basic inputs during a crackdown on corruption in the public hospitals of the city of Buenos Aires. Documents positive impact of intensified procurement monitoring, but finds that higher wages only reduce corruption if the presence of strong monitoring.

Easterly et al. 2012. Rhetoric versus Reality: The Best and Worst of Aid Agency Practices

Rates and ranks bilateral, multilateral, and UN agencies on their levels of aid transparency, specialization, selectivity, ineffective aid channels and overhead costs.

Eijkenaar et al. 2013. Effects of pay for performance in health care: a systematic review of systematic reviews Comprehensive overview of effects of pay for performance based on a synthesis of findings from published systematic reviews.

Ensor. 2004. Informal payments for health care in transition economies

Overview of the topic. Groups payments into three types: cost contributions, including supplies and salaries, misuse of market position and payments for additional services.

Falkingham. 2004. Poverty, out-of-pocket payments and access to health care: Evidence from Tajikistan Based on national survey data, argues that both official and informal payments deter people from seeking medical assistance.

Filmer et al. 2000. Weak Links in the Chain: A Diagnosis of Health Policy in Poor Countries

Argues that public spending on health has had little impact on average health, and that much of this is due to poor service delivery.

Franck et al. 2012. Does the leader's ethnicity matter? Ethnic favoritism, education, and health in Sub-Saharan Africa. Study of the impact of ethic favouritism in 18 countries in sub-Saharan Africa. Finds that sharing the same ethnicity as the country's leader resulted in an average reduction of 0.4% in infant mortality, plus gains in school attendance and literacy.

Friedman. 2018. Corruption and averting AIDS deaths

Explores the impact of corruption on the effectiveness of antiretroviral drugs in preventing AIDS deaths and the potential channels that generate this relationship. Finds that countries with higher levels of corruption experience a significantly smaller drop in AIDS deaths as a result of the same quantity of drugs imported.

Fryatt et al. 2017. Health sector governance: should we be investing more?

Finds a growing body of evidence about the effectiveness of strategies to strengthen health sector governance in low and middle-income countries, but cautions that strategies must be customised to local context.

Fujii. 2018. Regional prevalence of health worker absenteeism in Tanzania

Combining Service Provision Assessment (SPA) survey data and national survey data for Tanzania. Finds large regional variations in absenteeism levels.

Gaal. 2006. Gift, fee or bribe? Informal payments in Hungary

Anthropological approach. Argues that the motivation behind informal payments is multifaceted, and that 'gratitude payment' is no more than a convenient myth.

Gaal et al. 2006. Informal payments for health care: Definitions, distinctions, and dilemmas

Discusses the diversity and weaknesses of commonly used definitions of informal payments. Argues that these make cross-country comparisons of data practically impossible. Highlights examples of highly divergent data on payments within one country. Proposes a definition based on contributions made to ensure patients receive health care they are entitled to. Notes this does not always entail illegality. Explores broader policy implications.

Gaal et al. 2010. Strategies to address informal payments for health care

Summarises definitions and typology. Using four case studies, identifies critical success factors in reform efforts, first and foremost the need for a well-designed systematic approach rooted in local realities.

Gaitonde et al. 2016. Interventions to reduce corruption in the health sector

Cochrane systematic review. Concludes that "[t]here is a paucity of evidence regarding how best to reduce corruption" in the health system.

GAP [Government Accountability Project]. 2014. India & HIV

Investigative report detailing how the World Bank attempted to cover up a corruption scandal in a project in India, including by conducting a "smear campaign" against the whistleblower. "The end result of the Bank's lack of action is an increased likelihood that an unknown number of Indian citizens have contracted HIV."

GES. 2018. Recomendaciones de politica: En busca de una mayor integridad en el Sistema de salud colombiano *Policy recommendations for curbing corruption in the Colombian health system, based on an extensive study.*

Gibbons et al. 2010. The global numbers and costs of additionally needed and unnecessary caesarean sections performed per year: Overuse as a barrier to universal coverage

Argues that 6.2 million unnecessary caesarean sections are performed worldwide every year, at a cost of US\$2.3 billion. This expenditure would be enough to finance all medically required caesarean sections in poorer countries more than five times over.

Goldstein et al. 2013. The effect of absenteeism and clinic protocol on health outcomes: the case of mother-to-child transmission of HIV in Kenya

Study at an antenatal clinic in Kenya. Found that absenteeism made HIV positive women less likely to learn their HIV status during their pregnancy, and thus less likely to receive drugs and services for the prevention of mother-to-child transmission of HIV. All women were less likely to eventually give birth at a hospital or health centre.

Gornall. 2015. The truth about cash for referrals

Discusses cases of kickbacks for referrals in the private healthcare sector in the UK, and the legal and regulatory framework.

Habibov et al. 2017. Revisiting informal payments in 29 transitional countries: The scale and socio-economic correlates Assesses informal payments in 29 countries in CEE based on comparable household survey data. Finds that those

experiencing lower quality healthcare, those with worse health, and those with higher incomes are more likely to make informal payments.

Handlos et al. 2016. Return migrants' experience of access to care in corrupt healthcare systems: The Bosnian example Explores how corruption in the healthcare sector affects access to healthcare for refugees who repatriated to Bosnia.

Hanf et al. 2011. Corruption Kills: Estimating the Global Impact of Corruption on Children Deaths

Uses linear regressions on data from 178 countries to calculate that "more than 140,000 annual children deaths could be indirectly attributed to corruption".

Hanna et al. 2018. New possibilities for cutting corruption in the public sector

Argues that personality tests and psychological profiling offer innovative ways for cutting corruption in the public sector of developing countries.

Hart. 2015. Building Donors' Integrity Systems - Background Study on Development Practice Initial findings of a project to gather information on the integrity practices of development agencies, based on a survey and interviews with donor staff.

Heaton. 2019. NHS Fraud Squad: Catching the crooks stealing £1.3 billion from the system Article written by NHS fraud investigator. Estimates that close to £1.3 billion is defrauded from the NHS every year. Provides a wide range of examples of fraud.

Hobbs. 2005. Corruption in World Bank financed projects: Why bribery is a tolerated anathema Argues that the World Bank's approach to anticorruption is "organized hypocrisy": zero tolerance rhetoric or

Argues that the World Bank's approach to anticorruption is "organized hypocrisy": zero tolerance rhetoric coexists with a de facto tolerance of corruption.

Huang. 2019. If a government can't deliver safe vaccines for children, is it fit to rule? Argues that shoddy management of vaccine programmes undermines government legitimacy in China.

Hussmann. 2012. Vulnerabilities to corruption in the health sector: Perspectives from Latin America systems for the poor

Explores the main vulnerabilities to corruption in the national health sub-systems that provide health services to the poor, and the specific risks that affect service delivery at the sub-national levels. Includes two case studies.

Hutchinson et al. 2018. We need to talk about corruption in health systems

Argues that health community has been reluctant to talk about corruption due to a variety of reasons. Anti-corruption efforts should begin with seeking agreement on the scale and nature of the problem, and then focus on the most harmful practices in terms of their impact on the health system.

ICIA. 2011. DFID's Approach to Anti-Corruption: Terms of Reference

ToR for a report commissioned by the UK's Independent Commission on Aid Impact.

Iles. 2019. Government doctor absenteeism and its effects on consumer demand in rural north India Calculates that eliminating provider absenteeism in North India would increase utilisation of government outpatient fever treatments from 18% to 50%.

Jain et al. 2014. Corruption: medicine's dirty open secret BMJ editorial calling for doctors to "fight back against kickbacks".

Johnsøn. 2015. The basics of corruption risk management: A framework for decision making and integration into the project cycles

Argues that risk assessments should consider two main dimensions of an act of corruption, probability and expected impact, and that cost-effectiveness considerations should determine whether corruption risks should be treated, and how. "The aim is not to eliminate corruption but to optimise development results."

Johnsøn et al. 2012. Mapping evidence gaps in anti-corruption: Assessing the state of the operationally relevant evidence on donors' actions and approaches to reducing corruption

Reviews and maps the current evidence on effectiveness of different anti-corruption reforms. For over half of the interventions examined, the findings of the evidence were mixed or even contested. For over half of the interventions, the evidence found is weak. Notes "a limited focus of existing anti-corruption research on operationally relevant research questions in general".

Jones et al. 2011. Prevention not cure in tackling health-care fraud

Provides global headline estimates for healthcare fraud, and discusses a variety of counter-measures taken in different countries.

Jowett et al. 2016. Spending targets for health: No magic number

Documents large variations in health system performance versus health expenditures across countries, especially in the lowest-spending countries. Concludes that "there is significant scope for UHC progress through greater efficiency in how money is spent."

Kaheru. 2010. Uganda: Shortage of malaria drugs is largely artificial

Comments on study finding that only 20% of people collecting malaria drugs from government health centres actually had the disease. About 1.6 million doses affected countrywide every month, creating supply shortages. Hypothesises that most are hoarding the drug for personal use at later point in time. Introduction of rapid testing kits to allow clinics to check whether people have malaria or not.

Kenny. 2017. Results not receipts: Counting the right things in aid and corruption

Argues that donor anti-corruption should focus on monitoring ultimate outcomes, rather than on procurement and financial management processes.

Kisakye et al. 2016. Regulatory mechanisms for absenteeism in the health sector: a systematic review of strategies and their implementation

Systematic review of 26 studies set in high income countries to identify regulatory mechanisms aimed at mitigating health care worker absenteeism in low- and middle-income countries. Concludes that the success of these interventions is heavily influenced by the context within which they are applied.

Klitgaard et al. 2000. Corrupt Cities: A Guide to Cure and Prevention

Book on anticorruption approaches, drawing on case studies from La Paz in Bolivia. Analyses root causes, documents how measures were designed and implemented, flags instances of political and bureaucratic pushback, and discusses successes and failures.

Lewis. 2006. Governance and corruption in public health care systems

Landmark paper exhaustively reviewing the literature and evidence on corruption's impact on health care delivery in developing countries. Concludes that returns to investments in health are low where governance issues are not addressed.

Lieven. 2012. Pakistan: A Hard Country

Excellent discussion of political and governance dynamics in a country where public sector clientelism takes precedence over the provision of public services. Does not focus on health services per se.

Lindelow et al. 2006. Measuring corruption in the health sector: What we can learn from public expenditure tracking and service delivery surveys in developing countries

Notes that increased government spending on health is not associated with a reduction in child mortality in crosscountry data in high corruption contexts.

Mackey et al. 2018. The Sustainable Development Goals as a framework to combat health-sector corruption Summarises the literature on corruption in the health sector, and discusses relevance to the SDGs.

Makuta et al. 2015. Quality of governance, public spending on health and health status in Sub Saharan Africa: a panel data regression analysis

Analyses panel data from 43 countries over fifteen years. Finds that while public spending on health improves health outcomes, its impact is mediated by quality of governance. Thus, improving quality of governance would improve health outcomes in the region.

Marquette et al. 2019. What we found out about bribery patterns in Uganda's health care system

Discusses how Uganda's high profile and powerful Health Monitoring Unit has been successful at curbing corruption in healthcare service delivery, but warns of possible negative consequences in the long term.

McPake et al. 1999. Informal economic activities of public health workers in Uganda: implications for quality and accessibility of care

Study of the 'informal' economic activities of health workers in Uganda, carried out in 10 sub-hospital health facilities. Examines leakage of drug supply, the informal charging of patients and the mismanagement of revenues raised from the formal charging of patients.

Mehtta. 2013. Unhealthy profits and unwanted hysterectomies: How unregulated private health care in India is risking women's lives

Journalistic account focusing on unnecessary hysterectomies.

Mengqi Qin et al. 2019. The impact of user charges on health outcomes in low-income and middle-income countries: a systematic review

Systematic review concluding that "reduced user charges were associated with improved health outcomes, particularly for lower-income groups and children in LMICs".

Michaud et al. 2015. Corruption and global health: Summary of a policy roundtable

Brief discussion of corruption and anti-corruption, with a focus on US foreign aid programming.

Monitor. 2018. Uganda: Government to give drugs to only patients with national IDs

Media report on forthcoming introduction of ID card requirements for tracing, accountability and follow up on use of medicines supplied to public facilities.

Morrison. 2010. An analysis of anti-kickback and self-referral law in modern health care

Traces the evolution of anti-kickback and self-referral law in the U.S., explores pros and cons of prohibiting these practices, and discusses the absence of 'bright lines' and continuing ambiguities.

Mostert et al. 2011. Effect of corruption on medical care in low income countries

Concludes that corruption in pediatric oncology deprives patients of access to medical care, contributes to the high rates of abandonment of treatment, and leads to lower chances of survival.

Muldoon et al. 2011. Health system determinants of infant, child and maternal mortality: A cross-sectional study of UN member countries.

Examines the association between health system indicators and mortality rates. Finds that national corruption rates have a significant impact. Concludes that improving access to water and sanitation and reducing corruption within the health sector should become priorities.

NAO. 2011. Department for International Development: Financial Management Report Annual UK National Audit Office report on DFID.

Narayanan. 2015. Doctors in India are shamelessly lying to women to perform unwarranted hysterectomies Journalistic account of unnecessary hysterectomies in India.

Nayyar et al. 2012. Poor-quality antimalarial drugs in southeast Asia and sub-Saharan Africa

Data shows that around a third of antimalarial drugs collected in southeast Asia and in southeast Asia are poor quality. Stockouts, thefts, high prices, and the erratic supply of antimalarial drugs contribute to the problem.

Nsofor. 2019. How tech can help win the fight against neglected tropical diseases Blog chronicling recent public health tech developments in Africa.

NYT. 2009. Referral system turns patients into commodities Discusses how and why U.S. doctors engage in corrupt practices related to patient referrals.

OCED/DAC. 2005. The Paris Declaration on Aid Effectiveness Declaration on aid effectiveness signed by numerous donors and recipient countries.

Olafsdottir et al. 2011. Health systems performance in sub-Saharan Africa: governance, outcome and equity

Study using cross sectional data from 46 countries in Africa finds that the quality of governance is strongly correlated to under-five mortality rates, even after controlling for other factors. Concludes that "the quality of governance may be an important structural determinant of health systems performance".

Olken. 2007. Monitoring Corruption: Evidence from a Field Experiment in Indonesia

Classic study quantifying the amount of corruption in a World Bank financed programme, and the effects of several different accountability mechanisms in reducing the scale of corruption.

Olken et al. 2011. Governance Review Paper: J-PAL Governance Initiative

Extensive summary of the "empirically rigorous evidence on governance issues in low-income countries". Flags gaps in the literature and identifies new directions for research. Lists dozens of open research questions.

Onwujekwe et al. 2018. Corruption in the health sector in Anglophone West Africa: Common forms of corruption and mitigation strategies

Systematic review of the literature on corruption types, causes, consequences and anti-corruption approaches in Anglophone West Africa. Argues that to be effective, anti-corruption strategies must be comprehensive in nature and integrate coordinated reforms across the sector.

Onwujekwe et al. 2018. Corruption in the Nigerian health sector has many faces. How to fix it Blog giving overview of corruption challenges and possible counter-measures.

Oxfam. 2013. Unregulated and unaccountable: How the private health care sector in India is putting women's lives at risk

Oxfam investigation into unnecessary caesareans and hysterectomies in India. Concludes that private healthcare sector is under-regulated.

Rahmani et al. 2013. Antenatal and obstetric care in Afghanistan

Identifies corruption, including the importance of personal contacts, as an obstacle to equitable antenatal and obstetric health care in Afghanistan.

Rajkumar et al. 2002. Public Spending and Outcomes: Does Governance Matter?

Analysis of data data from a cross-section of countries over two years. Finds that in countries rated as very corrupt, public health spending at the margin will be inefficacious. "Simply increasing public spending on health and education is less likely to lead to better outcomes if countries have poor governance."

Rao. 2015. Revisiting Chhattisgarh: The Indian state where a woman's uterus is a way for doctors to get rich Journalistic account, highlighting that poor and illiterate women are most at risk from unnecessary hysterectomies.

Rashidian et al. 2012. No evidence of the effect of the interventions to combat health care fraud and abuse: a systematic review of literature

Systematic review of the literature finds a lack of evidence for the effectiveness of interventions to combat health care fraud.

Sachan. 2013. Tackling corruption in Indian medicine

Discusses kickbacks for referrals and the weakness of watchdog institutions in India.

Savedoff. 2007. Transparency and corruption in the health sector: A conceptual framework and ideas for action in Latin American and the Caribbean

Lists potential anti-corruption approaches for LAC health systems.

Savedoff. 2008. Pay for honesty? Lessons on wages and corruption from public hospitals

Summary of the findings of studies of corruption in Latin American hospitals. Argues that "without some form of monitoring to detect corruption and a real chance of penalties, raising wages is not likely to make a difference".

Savedoff. 2012. Massive corruption revisited: The value of portfolio estimates

Discusses the potential benefits to examining a sample out of a broader portfolio for improper payments or fraud, through investigations and possibly sting operations.

Savedoff et al. 2006. Why are health systems prone to corruption?

Argues that uncertainty, asymmetric information and large numbers of actors create systematic opportunities for corruption not found in other sectors. Anti-corruption efforts are hindered by non-competitive markets, large-scale public sector involvement, a lack of reliable information, and the sheer scale of the sector.

Savedoff et al. 2008. Pay for honesty? Lessons on Wages and Corruption from Public Hospitals

Argues that evidence show that raising wages in situations of generalized impunity is likely to be ineffective, so low pay wage levels need to be addressed in combination with improving basic audit mechanisms and prosecution.

Savedoff et al. 2016. Global Health Aid and Corruption - Can We Escape the Scandal Cycle

This paper reviews four cases involving the World Bank, USAID, the Global Fund, and European donors in terms of the severity of abuses, the quality of evidence, the responses of funders and recipients, and the impact on health and institutions. Argues for a stronger focus on programme results.

Serneels et al. 2018. Microeconomic institutions and personnel economics for health care delivery: a formal exploration of what matters to health workers in Rwanda

Qualitative interviews on corruption and performance drivers with healthcare workers in Rwanda. Reviews evidence on impact of performance-linked pay and community monitoring. Discusses intrinsic versus extrinsic motivations, and three levels of norms: society-wide norms, professional norms, and workplace norms. Argues that non-financial incentives like access to training, job security, chances of promotion and housing pay a far larger role than generally recognised.

Silverman et al. 2015. Aligning Incentives, Accelerating Impact: Next Generation Financing Models for Global Health *Explores potential new Global Fund funding models, with a focus on outputs, outcomes, or impact based finance.*

Sharma. 2010. Politics and corruption mar health care in Nepal

News article on how political appointments to universities and hospitals and allegations of corruption have led to clashes and the closure of health services in post-conflict Nepal.

Sommersguter-Reichmann et al. 2018. Individual and institutional corruption in European and US healthcare: Overview and link of various corruption typologies

Overview of corruption typologies, cited estimate of €56 billion annual loss to Europe as a result of corruption.

Srivastava. 2018. Private doctors perform most hysterectomies in India: Survey Reports on survey data "confirming campaigners' fears over unnecessary surgeries for profit".

Steingrüber. 2019. How will we solve the health financing problem and bring in the age of universal health coverage? Calculates that the sums currently lost to corruption in the sector would be sufficient to achieve UHC worldwide.

Stephens et al. 2017. When surgical resources are severely constrained, who receives care in Uganda? Follow-up of patients seeking surgical care. Finds that social capital was the strongest predictor of access to surgery, while bribe-paying was not very effective.

Stephenson. 2015. Trust in government and public health: Corruption and Ebola revisited *Critically discusses the possible linkages between corruption and the West African Ebola epidemic.*

Stepurko et al. No date. Informal payments in health care

Discusses informal payments by patients in the context of broader corruption and informality patterns in health care. Summarizes the results of a 2010 CEE cross-country study on patient payments.

Tayler et al. 2006. The link between corruption and HIV/AIDS

Argues that there is "ample evidence" that corruption impedes efforts to prevent infection and treat people living with AIDS in many parts of the world.

The Nation. 2019. Eight grilled over theft of Sh5m HIV kits from Murang'a hospital

Media report on theft by staff of HIV testing kits at Kenyan hospital. Notes that "Lately, patients have been complaining of lack of medicine at the hospital".

Transparency International. 2011. Corruption Perceptions Index 2011 Corruption Perceptions Index for 2011.

Transparency International. 2013. Global Corruption Barometer 2013

Based on a survey of more than 114,000 respondents in 107 countries, asking about their experiences and perceptions of corruption, including in healthcare. Globally, 17% had paid a bribe when accessing health services over the preceding year. Full data set available online.

Tormusa et al. 2016. The impediments of corruption on the efficiency of healthcare service delivery in Nigeria Brief discussion and policy recommendations.

Turcotte-Tremblay et al. 2016. Does performance-based financing increase value for money in low- and middleincome countries? A systematic review

Concludes that the existing evidence bade is weak, and that stronger empirical evidence on whether performance based financing represents good value for money in LMICs is needed.

Tweheyo et al. 2017. A qualitative study of health workforce absenteeism in rural Uganda

Fantastic qualitative study based on interviews with 95 healthcare workers in rural Uganda, plus focus groups. Explores various drivers of absenteeism in depth and suggests possible remedies. Notes paucity of relevant research in this area.

UNDP. 2011. Fighting corruption in the health sector - methods tools and good practices

Study highlighting where and how corruption is a threat in the health sector, and how it can be diagnosed and tackled. Ten key lessons are identified and discussed.

USAID. 2018. The Use of Political Economy Analysis in Health Systems Strengthening

Argues that PEA can bring large benefits, but notes that there are "only a limited number of examples where PEA has been fully embedded as part of adaptive management or learning".

Vian. 2008. Review of corruption in the health care sector: Theory, methods and interventions Concise overview of the topic, covering causes, measurement, and curbing of corruption. Contains numerous references to the academic literature, case studies, and policy initiatives.

Vian. 2013. Implementing a transparency and accountability policy to reduce corruption: The GAVI Alliance in Cameroon Case study that summarises GAVI experiences and distils lessons learnt that could be of use to other donors.

Vian. 2014. Corruption risk assessment in the health sector in Kosovo Discusses types of corruption, causes and enabling factors, and possible mechanisms for prevention in Kosovo.

Vian. 2015. Connecting health and the fight against corruption Blog summarizing some of the health impacts of corruption, with links to the literature.

Vora. 2017. Patients pay a heavy price as India's doctors continue with the corrupt 'cut practice'

Journalistic account exploring the dynamics of kickbacks for patient referrals in India.

WHO. 2017. Together on the road to universal health coverage

Sets out the WHO's rationale and vision for UHC, suggests policy priorities, and calculates investment needs. "Ensuring universal health coverage is our top priority at WHO".

WHO. 2018a. Aligning public financial management and health financing

Argues that public financial management systems play a key role in ensuring sustainable financing for UHC in most countries.

WHO. 2018b. Public spending on health: A closer look at global trends

Overview of health spending worldwide, including private and public spending, grouping countries into different income brackets. Includes data on public and private spending, and some disaggregation by health intervention type and disease area.

WHO. 2018c. Universal health coverage (UHC) WHO fact sheet, published December 2018.

WHO. 2018d. Integrating a focus on anti-corruption, transparency and accountability in health systems assessments Provides detailed recommendations for incorporating an anticorruption perspective into health system assessments, with a focus on prevention. Includes a list of key informant interview questions.

WHO and World Bank. 2017. Healthy systems for universal health coverage: A joint vision for healthy lives Argues that health systems strengthening is "the key means to achieve UHC", and that UHC in turn contributes to the achievement of many other SDGs.

Witvliet et al. 2013. Sick regimes and sick people: a multilevel investigation of the population health consequences of perceived national corruption

Empirical analysis of 20 African countries concludes that "[n]ational perceived corruption levels seem to be associated with negative health outcomes in both young and old, where the lower social status groups seem to fare slightly worse".

World Bank. 2012. Fighting Corruption in Public Services: Chronicling Georgia's Reforms

Extensive study chronicling Georgia's reform efforts in the wake of the 2003 Rose Revolution. Excellent case study, but glosses over the authoritarian approach and measures used to drive forwards reform, and the large short-term social costs of resulting mass redundancies in the public sector.

World Bank Group. 2007. Detailed Implementation Review: India Health Sector

In-depth review chronicling widespread fraud in World Bank financed health programmes in India, in particular in a largescale hospital construction programme in Orissa.

Wojczewski et al. 2015. Portrayal of the human resource crisis and accountability in healthcare: A qualitative analysis of Ugandan newspapers

Concludes that "The coverage of accountability in the Ugandan newspapers surveyed is insufficient to generate informed debate on what political actions need to be taken to improve the crisis in health care and services."

Yamada et al. 2013. Why is absenteeism low among public health workers in Lao PDR?

Finds that absenteeism rates in Lao are significantly lower than in other LICs. Delayed payment of wages, rural workplace and the proximity of workplace to hometown positively correlate with absenteeism.

Zamboni et al. 2018. Audit risk and rent extraction: Evidence from a randomized evaluation in Brazil

Finds no evidence that increased audit risk curbed corruption in procurement, but did not affect the quality of publicly provided preventive and primary health care services as measured through user satisfaction surveys. Hypothesise that this is largely due to a lower threat of sanctions for absenteeism than for procurement corruption.

Transparency International Health Initiative

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