

CORRUPTION IMPACT ON HEALTHCARE SYSTEMS DURING THE COVID-19 PANDEMIC

Ionut – Cristian PREDA¹

¹Lucian Blaga University of Sibiu, Romania, 0009-0006-3433-2136

Abstract:

Medical system is one of the public sector directly affected by corruption, with a negative impact on society. Mostly, corruption affects people's confidence in public institutions, undermines the sense of justice, and the quality of medical act or public administration are generally questioned. The presence of Covid-19 pandemic along with economic difficulties that countries were facing at the end of 2019, outlined the elements needed to set up a crisis situation. The most affected and hard-to-try public systems was the healthcare sector, and it was necessary to identify solutions that would prove useful in the face of the aggressive spread of the virus and the exponential increase in cases of disease. In this way, was drawn an opportunity for corruption to flourish in healthcare sectors around the world, the main cause being the mismanagement of financial resources allocated to the fight against pandemic. Procurement of goods and services for a proper treatment against disease, has generated favorable conditions for the embezzlement of healthcare funds, by instant appearance of companies specialized in sales segment, and by involving nepotism and favoritism in the procedures for awarding public contracts. Like so, the research explores the recent connection between corruption and COVID-19 pandemic. In this study the information collected from OECD, Transparency International Index, World Health Organization and from Romanian judicial system will be analyzed to underline the factors of corruption, to elaborate multi-level approach that reveals corruption's appearance and evolution, to indicate the relation between public health and corruption acts. The aim is to achieve objectives like building, developing and protecting an impartial healthcare system, strengthening the integrity of medical act through education, prevention and responsibility, and developing rigorous mechanisms of administrative verification.

Keywords: COVID-19 Pandemic, Corruption, Healthcare System

JEL classification: I18

1. Introduction

While corruption is an old phenomenon (Wierzynska, Steingrüber, Oroxom, & Bauhoff, Recalibrating the anti-corruption, transparency, and accountability formula to advance public health, 2020), COVID-19 has spotlighted corrupt healthcare systems and has renewed concerns about society's lack of practical solutions against this other silent pandemic (Gallego, Prem și Vargas 2020). During the COVID-19 outbreak, when hope was frail, and help was often far away, the incidence of corruption was on the rise (Chauvin 2021).

Further, corruption and inefficient systems undermine healthcare systems' capacity to contribute to better health, industrial growth, and development (T. Vian, Anti-corruption, transparency and accountability in health: concepts, frameworks, and approaches 2020). One of the issues with severe consequences produced in time, the public health has been dealing with, is the corruption in the procurement of essential pharmaceuticals and medical devices, recruitment of health care providers, or distribution of vaccines and drugs (Sekalala, Masud and Bosco 2020). It is an urgent call to mitigate these consequences, especially during a health crisis such as the COVID-19 pandemic. (Rodríguez-Morales, et al. 2020).

Corruption is one of the fundamental issues that threaten the health sector (Hussmann 2011). Corruption is an insidious entity that resolves the rule of law. The proliferation of bribery in the public sector would increase political corruption and extinguish the legitimacy of the government (Wrage 2007). These types of activities would lead to the failure of the government. Worldwide, 500 billion

¹ cristianpreda39@gmail.com

dollars of 7.5 trillion dollars spent on health is lost due to corruption each year and 1 out of 6 people (17%) in the world declare that he/she should pay a bribe when dealing with the health sector (Transparency International, Health 2021).

On average, the loss to fraud and error is more than 6% of health expenditure, and one-third of OECD citizens consider the health sector to be corrupt or extremely corrupt, which means that 45% of people globally think that corruption in the health sector is a serious problem. Overall, evidence suggests that up to one-fifth of health spending could be channeled to better use, numbers showing that many administrative projects add no value, and money is lost due to fraud and corruption (OECD, Tackling wasteful spending on health 2017).

The European Union speaks about different corruption typologies for the health sector, defining this phenomenon from 6 perspectives, such as: bribery in medical service delivery; procurement corruption; improper marketing relations; misuse of (high) level positions; undue reimbursement claims; fraud and embezzlement of medicines and medical devices (European Commission 2013).

In order to access quality health services, a public procurements service is required in order to identify and to obtain appropriate medication to combat a pandemic such as COVID-19. It is the fundamental interface between the public sector and the suppliers of medication and medical devices and the aim of the public procurements is to attain an appropriate amount of medication and medical devices at the best available (Cohen 2006).

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of coronavirus disease 2019 (COVID-19), has rapidly spread across the world. On 11th March 2020, the disease was declared a pandemic by the World Health Organization (WHO) (World Health Organization, Coronavirus Disease 2019 (COVID-19) Situation Report - 67 2020).

Countries of all type were affected by the severe spread of the virus, whereas, the United States, the United Kingdom, Italy and Spain have been put to a great test during the pandemic, their highly efficient healthcare systems being deeply affected. Many less developed countries with inadequate healthcare systems faced great difficulties in their fight against the virus, having the number of casualties escalating and public sufferings becoming unimaginable. This crisis situation was the effect of three responsible issues: poor governance and increased corruption, inadequate healthcare facilities, and weak public health communication (Al-Zaman 2020).

In response to virus spread, most countries concentrated their initial efforts on blocking transmission by quarantining confirmed cases and isolating contacts. With the number of infected individuals increasing rapidly, governments began to employ more restrictive procedures concerning the activities and movements of the general population. However, the effectiveness of these responses varied both between and within countries due to several factors such as timeliness, preparedness of healthcare systems, and even sociocultural aspects that influenced the awareness and compliance of the public (Dascalu 2020). In this effort of controlling the spread of the disease, many governments in different regions have established stringent lockdown measures, restricting the mobility of millions of citizens and paralyzing the operation of a large fraction of companies across multiple sectors of the economy (Acemoglu, et al. 2020).

The lockdowns measures have hit developing countries hard, because the economic sector was almost shut down, the main attention being focused on the function of medical system. In this way, different categories of population were affected, mostly those that derive their livelihood from informal activities, most of which cannot be executed remotely and that lack any access to safety nets such as unemployment insurance (Loayza and Pennings 2020). Consequently, in addition to the large investments in medical infrastructure and related supplies that governments have had to make to face the health crisis, a large part of the budget has been allocated to meet the economic needs of the most poor and vulnerable, as well as to help survive small and medium businesses that are more vulnerable to large periods of economic inactivity (Gallego, Prem and Vargas 2020). In this paper we outline the fact that an opportunity for corruption to flourish in healthcare sectors around the world was set.

Budgetary responses were through an increase in expenditure for provision of government services and commitments through guarantees and loans. The increase in health and other government expenditures occurred through four principal channels: supplementary budgets to increase appropriations, transfers between fiscal years to reallocate unused funds from previous years, reprioritized funding from a government's existing budget, and contingency funds for unanticipated events (OECD, Adaptive Health Financing: Budgetary and Health System Responses to Combat COVID-19 2021).

Moreover, countries across the world have dedicated unprecedented resources to combatting COVID-19, aspects that included a series of measures designed to mitigate and contain the spread of the virus, and to provide people with appropriate treatment. In order to properly manage the crisis generated by the pandemic, alongside medical measures, fiscal and balance sheet measures were necessary, such as financial support for workers and vulnerable groups, liquidity support for businesses through tax deferrals and government guarantees (OECD, Initial Budget and Public Management Responses to the Coronavirus (COVID-19) Pandemic in OECD Countries 2020).

During the fight against COVID-19 pandemic, one of the key players in the fight against the disease, were the subnational governments (SNGs), due to their responsibility for a significant share of public expenditure on health, regional and local authorities delivering critical short-term containment measures, making sure that the health systems have the right capacity to respond to any challenge and to provide people with an appropriate medical treatment.

In Australia, every state and territory government has announced a spending response to the COVID-19 crisis, approximately 28% is dedicated to hospitals and health care, including Intensive Care Unit (ICU) capacity, COVID-19 testing, ventilators, medical equipment and respiratory clinics (Wood, Emslie and Blane 2020). In the United States, most states have increased their appropriations for health and/or created special appropriations to respond to the COVID-19 crisis. In Belgium regional governments have announced significant budgetary measures directed towards the health system, for example, Walloon set an envelope of EUR 115 million earmarked to help the health and social sector (OECD, Adaptive Health Financing: Budgetary and Health System Responses to Combat COVID-19 2021).

In Romania, the authorities followed WHO recommendations, thereby implementing measures in a similar manner to other countries that were affected by the novel coronavirus ((CNSCBT) 2020). However, challenges were faced at various stages of epidemic control, including large numbers of citizens returning from abroad, inadequate healthcare system infrastructure, and sociocultural determinants (Dascalu 2020).

On 26th February 2020, when the first case of COVID-19 was confirmed in Romania, the healthcare system was already facing difficulties, due to the lack of staff, many rural areas having no close access to healthcare units. Moreover, the majority of medical services were provided through the public healthcare system, which still largely relies on old infrastructure built under the former communist regime (Vlădescu, et al. 2016). It should also be mentioned that, Romania has the lowest health expenditure of all EU countries in both percentage of gross domestic product (GDP) and per capita expenditure (World Health Organization, Global Health Expenditure Database 2022). These shortcomings already caused issues during previous emergency situations, especially due to a lack of necessary equipment, inadequate medical facilities, and insufficient supplies (Romanian Ministry of Internal Affairs 2016).

Taking into consideration the aspects mentioned above, in this paper, we aim to underline the challenges countries face regarding corruption in public health sectors amid COVID-19 and practical solutions that can address these issues in the future.

2. Literature review

Corruption is known as a complex phenomenon, containing different causative factors, relationships, and processes. Despite that, until now, a universally accepted definition has not been outlined, even though quite a number of definitions have been proposed. For instance, Lambsdorff defines corruption as the misuse of public power for private benefit, involving money changing hands (Lambsdorff 2001).

According to the definition of Transparency International that is widely used in the literature, corruption is the abuse of entrusted power for private gain (Transparency International, *What is corruption?* 2022). Global health corruption is defined as the misappropriation of authority, resources, trust, or power for private or institutional gain that has adverse effects on regional, local, or international health systems and/or that negatively impacts individual patient and/or population health outcomes (Mackey and Liang 2012).

At the top of the sectors that are vulnerable to and, are at risk of corruption and bribery is the health sector (Jain, Nundy and Abbasi 2014). There are various reasons that cause this situation. In the health sector, there are lots of public funds and distinct actors, and crucial public roles are assigned to private actors (Savedoff and Hussmann 2006). Besides asymmetric information, the environment of uncertainty in the health sector, high public expenditures, and the complicated structure of the system create opportunities for the concealment of corruption and bribery (García 2019).

Scholars identified a model that reflects the factors responsible for corruption and how the abuse of power is connected to the pressures and incentives directed to the government members in terms of pressures to abuse, the opportunity to abuse, and rationalization.

The first factor that creates corruption is the opportunity to abuse. The monopoly position of the government agent, the lack of discretion of the government agent, inadequacy of accountability and transparency, the lack of citizens' voice in the decisions about health policies, and the non-punishment of corruption create great opportunities for corruption. The second factor is the pressure and incentives. In addition to financial problems in the family and the social pressures of the circle of friends or clients that create corruption, economic incentives may also trigger it. The third factor is rationalization. Social norms, personality characteristics, ethical beliefs, and attitudes affect corruption and help people to rationalize their corrupt behaviors. Therefore, in order for corruption to occur, these three factors should be present simultaneously (T. Vian, *Review of corruption in the health sector: Theory, methods and interventions* 2008).

In the health sector, corruption may be of various types such as bribery and embezzlement, money laundering, absenteeism, informal payment, concealment, influence trading, medicine irregularities, abuse of function, illicit enrichment, and obstruction of justice (Naher, et al., *The influence of corruption and governance in the delivery of frontline health care services in the public sector: A scoping review of current and future prospects in low and middle-income countries of south and south-east Asia*, 2020).

Different types of corruption may occur in different parts of the health sector, such as the purchase of equipment and supplies, including drugs, distribution, and use of drugs and supplies in service delivery, human resources management, financial management, etc. The common elements are bribes, political influence, and embezzlement of budget allocation, resulting in high-cost, inappropriate, or duplicative drugs and equipment, patients making informal payments to obtain drugs, loss of faith and freedom due to an unfair system, and reduced availability of public health programs and government medical services (T. Vian 2008).

Over the course of the pandemic, more than 2.7 million people have died out of more than 122 million confirmed cases of COVID-19. The spread of the disease has achieved an unprecedented clinical, political, and economic impact in low and middle countries, where governmental and non-governmental institutions have had to scramble to get risk preparation and control processes in shape, with some countries having their public policies on strengthening health systems, improving infrastructure, designing prevention programs and training the general population overnight.

Moreover, in these types of countries, COVID-19 has exerted substantial pressure on health systems worldwide (Gallego, Mendez and Rodríguez-Morales 2020).

Public procurement is prone to corruption and risks are exacerbated in the health sector (OECD, Health and Public Procurement 2022) because certain opportunities in the purchasing process such as inappropriate allocation of resources, the lack of control checks for the purchased drugs, and medicine, the mismanagement of public funds, create the right conditions for corruption to extend. Under these circumstances, we can say that corruption in the health sector can be reduced by more transparency regarding the price of medicine, more consolidated requirements at the central level, or joint procurement initiatives (OECD, Health and Public Procurement 2022).

Under urgent conditions, public procurements may open the way for increased corruption compared to normal conditions (Guterres 2020). Previous experience reveals that corruption and bribery in the purchase of medical devices and medication increase the related prices, ease the distribution of substandard and falsified products, and create problems in the supply of these products (Kohler and Wright 2020).

Compared to normal periods, the purchase of these goods and services during the Covid-19 faced a difficult challenge, because collusion among those who control supply chains has led to outrageous costs of much-needed goods, skewing the market and denying many people life-saving treatment (Guterres 2020).

During the COVID-19 pandemic, great efforts were made to find a cure for the disease, and, in this context, great pressure was on the vaccine projects area. Taking into consideration the urgency of the pandemic, vaccine development projects have been carried out faster than normal times. In this context, as of October 2022, 819 therapeutic and 274 vaccine projects have been conducted (BioWorld 2022). Until October 2022, 49 vaccines were approved, 80 countries have set vaccine trials (808 trials and 234 vaccine candidates) and 12 vaccines are no longer progressing (COVID 19 Vaccine Tracker 2022). Till the end of 2021, the distribution of 2.3 billion vaccines was accomplished (World Health Organization, COVID-19 Virtual Press conference transcript 2021).

With COVID-19 vaccines being approved for use in different parts of the globe, the scale and complexity of their manufacture, allocation, and distribution globally were unprecedented. There were also corruption risks that may threaten vital public health goals, such as the entry of substandard and falsified vaccines into markets, theft of vaccines within the distribution systems, leakages in emergency funding designated for the development and distribution of vaccines, nepotism, favoritism, and corrupted procurement systems (United Nations Office on Drugs and Crime 2021).

One of the major risks related to COVID-19 vaccines were the conflicts of interest, a proper example of this could be when a high-level officer of a government's COVID-19 vaccine research and development program, who used to work for a private vaccine company that is bidding for a large contract under the government program to manufacture a vaccine candidate, participates in a decision-making process on that contract (United Nations Office on Drugs and Crime 2021).

During the Covid-19 pandemic, governments have spent more than 16 trillion US dollars (Cutler and Summers 2020). Therefore, during the COVID-19 pandemic, all the elements needed to commit a corruption-related crime (motivation, opportunity, justification) were available for every person interested in putting their own interest above the general one. For example in South America, Peruvian and Argentinian politicians and their families received vaccinations prior to being officially eligible for them. There have also been reports of wide-ranging corruption scandals related to the COVID-19 vaccine in Brazil and Venezuela⁹. In Spain, local mayors received preferential access to vaccine doses before they were widely available to the general public. In Italy, there have been reports of vaccine sales on the grey market. Corruption scandals around the vaccine were also reported in Lebanon, South Africa, and China (Farzanegan și Hofmann 2021).

During the Covid-19 pandemic, the production of general products decelerated, while the demand for face masks, gloves, sanitization products, ventilators, and vaccines skyrocketed in 2020. Under these circumstances, the competitive environment saw a deterioration as an effect of

undermining the supply rules. In this context and taking into consideration the presence of the sudden health crisis, transparency and accountability have become more important than ever (Ellena, Brown și Dreher 2020).

The COVID-19 crisis created three main integrity challenges for governments in the area of public procurement. First, governments were urgently procuring large quantities of goods and services, such as hospital equipment, medical ventilators, hand sanitizers, face masks, and health services, in order to meet the immediate needs of the health sector and affected communities. A second integrity consideration emerging from the COVID-19 crisis was the lack of stockpile preparedness across many OECD countries, leading to increased competition for necessary supplies globally. Finally, besides the procurement of goods and services required to directly address the COVID-19 crisis, governments also had to manage ongoing public contracts. They must identify those, particularly at risk and provide effective responses for suppliers seriously affected by the crisis and its impact on economic development (OECD, Public Integrity for an Effective COVID-19 Response and Recovery 2020)

The disease outbreak of COVID-19 has exacerbated current corruption stresses in the acquisition of medical care in government settings, which range from disproportionate control to overt exploitation of public officials and public funds, necessitating effective governance responses (Sánchez-Duque, Zhaohui, Rosselli, & Bolaños-Portilla, THE IGNORED PANDEMIC OF PUBLIC HEALTH CORRUPTION: A CALL FOR ACTION AMID AND BEYOND SARS-COV-2/COVID-19, 2021).

Corruption can have different distinctions. It can be considered "big" or "small", it can be considered political or institutional, and it can be generalized or individual, but, the common factor is that it is always carried out consciously and intentionally (Sánchez-Duque, Zhaohui, Rosselli, & Bolaños-Portilla, THE IGNORED PANDEMIC OF PUBLIC HEALTH CORRUPTION: A CALL FOR ACTION AMID AND BEYOND SARS-COV-2/COVID-19, 2021).

According to a recent extensive analysis of the literature, it was concluded that mismanagement and a lack of effective government led to corruption, jeopardizing the fair distribution of basic healthcare facilities, making it more expensive for the vulnerable and disadvantaged community to access the medical facilities, resulting in worse health care systems which in turn increased the death toll in several regions especially the rural and undeveloped (Naher, și alții, The influence of corruption and governance in the delivery of frontline health care services in the public sector: A scoping review of current and future prospects in low and middle-income countries of south and south-east Asia, 2020).

It was also discovered that inequalities in the expenditure of funding and a lack of spending in healthcare systems had seriously undermined every country's healthcare systems including developed nations such as the USA, UK, Italy, Spain, and Germany (Saliba și Taher 2021). Poverty and inadequate wages, on the other hand in developing as well as developed nations, have also been attributed to disparities, which have intensified the dissemination of COVID-19 throughout the population or intensified the deleterious consequences in the disadvantaged community (Naher, și alții, The influence of corruption and governance in the delivery of frontline health care services in the public sector: A scoping review of current and future prospects in low and middle-income countries of south and south-east Asia, 2020).

3. The relationship between corruption and healthcare systems

Over time, corruption has been characterized as one of the main causes for the lack of investment and a low rate of economic development, an aspect that emerged from comparing the records of the countries most affected by this phenomenon and the records of underdeveloped states worldwide, finding an identity of countries between the two records (Mauro 1997).

Until the 1980s, the notion of corruption was an aspect known only among academics, being a marginal problem, which was considered to disappear as a natural result of the modernization process of politics, economy and society administration, the concept being based on several dominant factors

(authoritarian governance, intervention in the economy, pre-modern cultural values and institutions), corruption being considered only a national policy problem of underdeveloped countries seized by communist regimes, not taking into account the possibility that this phenomenon represents a problem for countries from North America, Western Europe or other countries developed according to the model of Western democracies (Speck 2005).

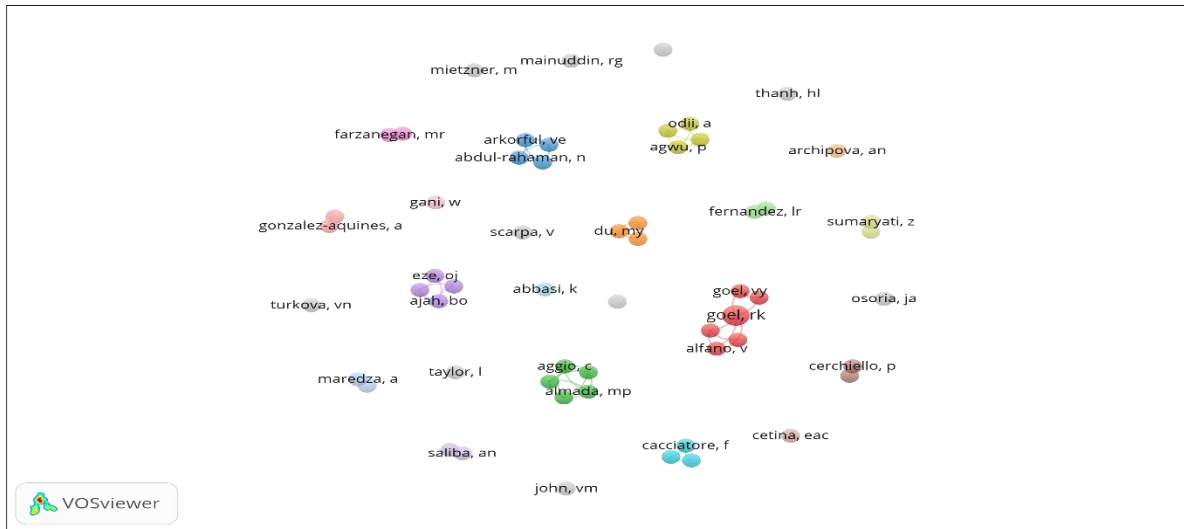
Following the analysis of the data collected in connection with the evolution and measurement of the incidence of the phenomenon of corruption, it was found, of a general nature, that the approach from the 1980s was a limited one, even wrong, limited only to theoretical models, without taking into account empirical evidence in this regard, such as the various international incidents that proved that the phenomenon of corruption can flourish even after the adoption of a liberal policy, after opening the markets to free competition and after the modernization of public administration, in reality corruption representing a challenge for all countries, both for underdeveloped ones (as a result of an inefficient allocation of economic resources, the lack of encouragement and attraction of foreign investors and the undermining of trust in public institutions), and for rich countries (as a result of the political instability created in international politics and undermining support for international aid) (Speck 2005).

The diversity of the phenomenon of corruption also emerges from the way in which public opinion perceives its effects and from the impact generated on society. Thus, in underdeveloped countries that regularly benefit from external financial support, including loans and budget support from international donors, and where the views of civil society, organizations, opposition parties, and including the media, are not taken into consideration by those who govern such countries, there is much more active involvement of external factors in overseeing the way public funds are used to prevent possible acts of corruption, than from the national public institutions, the willingness of governments to respond to demands and programs international anti-corruption measures being linked to the dependence on aid policy to guarantee the flow of resources (Williams and Theobald 2000).

Moreover, an analysis carried out on a number of 185 countries (54 with higher income sources and 131 underdeveloped), highlighted the fact that the presence of the phenomenon of corruption directly influences the physical and mental health of society, there being a differentiation generated by the level of development and the sources of income in a state, in the sense that, in developing countries where the level of corruption is very high, mental health is more affected than physical health, the balance of forces being totally opposite in the case of underdeveloped countries. Thus, it is necessary to pay more attention to anti-corruption measures, as they play an important role in the evolution of society, but they must be adopted taking into account the economic and cultural context of each nation (Achim , Văidean and Borlea 2020).

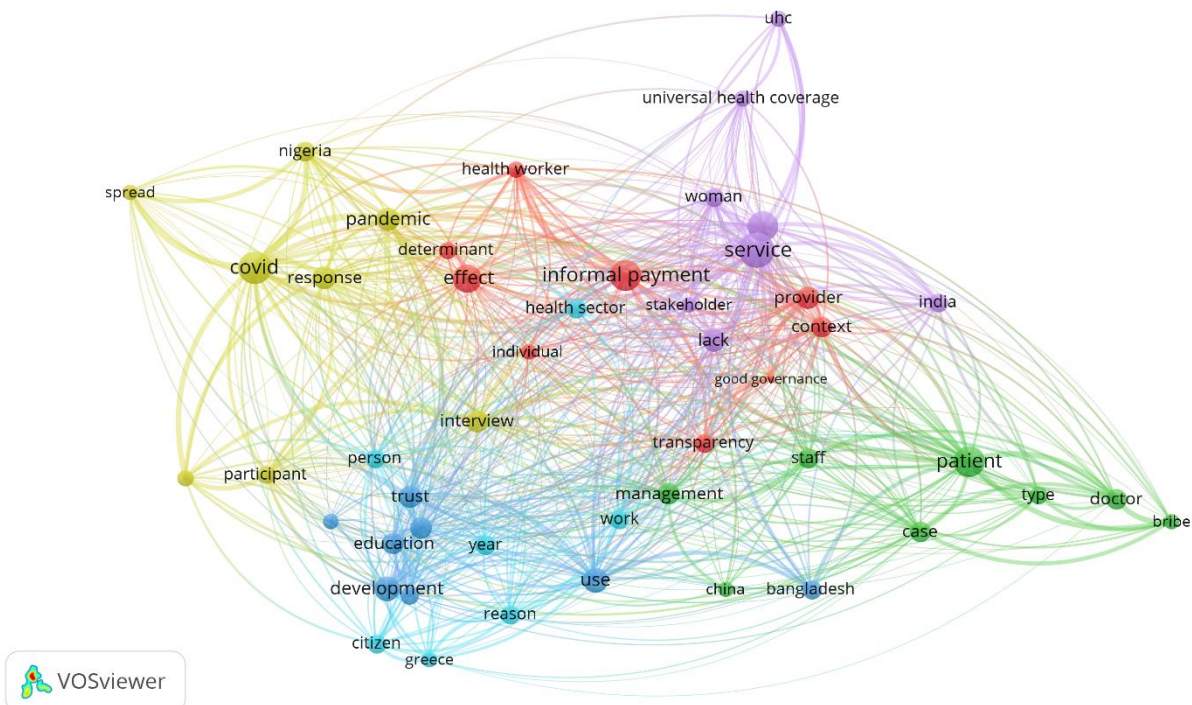
For a proper analysis of the relationship between corruption and the medical system, one of the most affected branches of the administrative apparatus, I chose to apply various search engines on the Web Of Science platform, in the sense that I aimed to identify the publications for the period 2018-2023 which analyzes the notion of corruption from the perspective of the medical system, meaning that a number of 112 results were generated for me, which I analyzed with the help of the VOS VIEWER program.

Figure 1: Articles regarding corruption in medical system



Thus, during the analyzed period, a number of 57 authors focused their attention on the analysis of the implication of the corruption phenomenon on the medical system, and implicitly on the covid-19 pandemic. The works of 14 authors could not be correlated with the other identified articles, but the remaining 43 authors could be linked based on the analysis of the title, abstract and content of each individual article.

Figure 2: The connections between health sector and forms of corruption



In this sense, it can be seen that the field of the medical sector is an element of increased interest for the study of many authors, the analyzed articles placing it at the center of the analysis regarding the correlation with the notions of pandemic, COVID-19, transparency, management, medical personnel and bribery. At the same time, a close connection can be observed between the informal payments that are practiced at the level of the medical systems, in exchange for facilitating the

obtaining of services, which in reality should not be conditioned by the remittance of benefits from the interested persons.

An important thing that emerges from this analysis is the fact that the emphasis on bribery and improper payments was not realized as a result of the outbreak of the covid-19 pandemic, but as a result of the formulation of the response strategy in the face of the aggressive spread of this disease, the reason being that by establishing the protocols to be followed, the environment in which action could be taken to combat the disease, the premises and opportunities necessary for the perception of undue benefits were identified.

Also, close links were found between transparency, management and the context generated by the presence of covid-19, the low level of transparency, meaning an increased level of corruption, which implicitly generates the granting of bribes to conclude contracts, to obtain jobs or services, by defrauding the legal provisions, the effect being the destruction of public trust in the quality of medical services.

The presence of corruption at the level of the medical system existed even before the emergence of COVID-19, during 2019-2020 medical services were strongly conditioned by the informal payments practiced by beneficiaries among medical personnel. A low level of managerial activity was also found, generated by the strong links between the notion of management and the notion of informal payments. Later, in the period 2020-2021, a broadening of the nucleus described above is noted, with connections being outlined between the outbreaks of the covid-19 pandemic, its evolution, the bribes given to doctors, other employees of the medical system, and the corruption practiced in this field. Practically, the emergence of the covid-19 pandemic was a reason for the expansion of the corruption phenomenon, but starting from 2021, a decrease in these ties can be observed. However, the pre-2019 core continues to exist, maintaining strong ties between consecrated core elements and looking for pandemic-like opportunities to see significant short-term increases in corruption implications.

Figure 3: Publication years

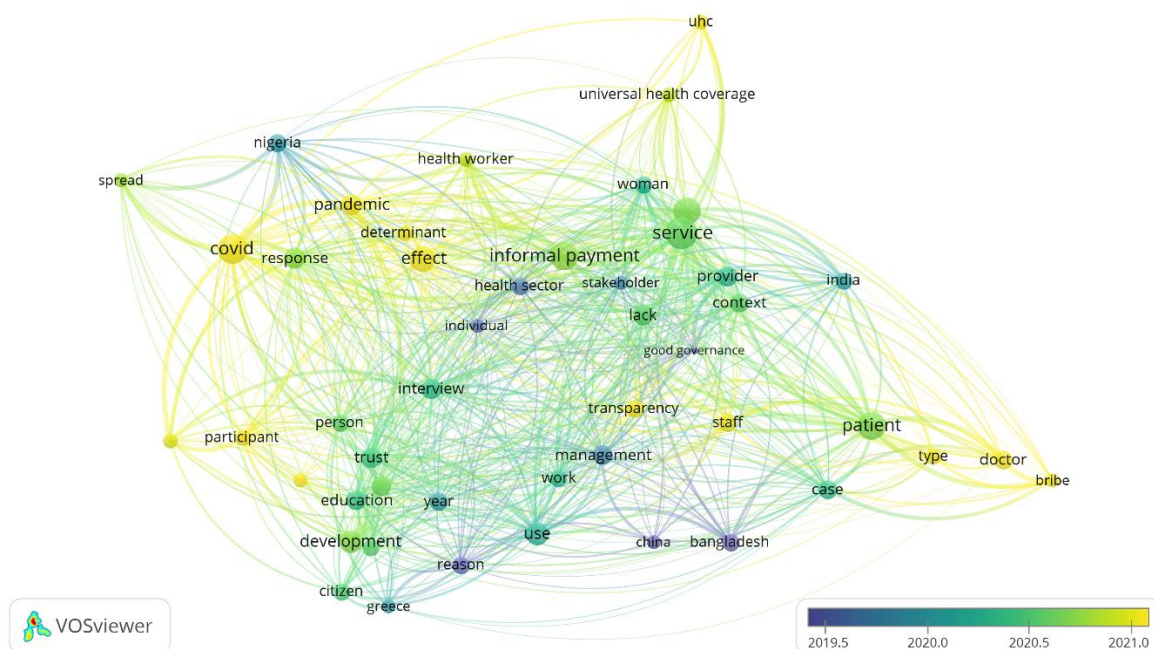
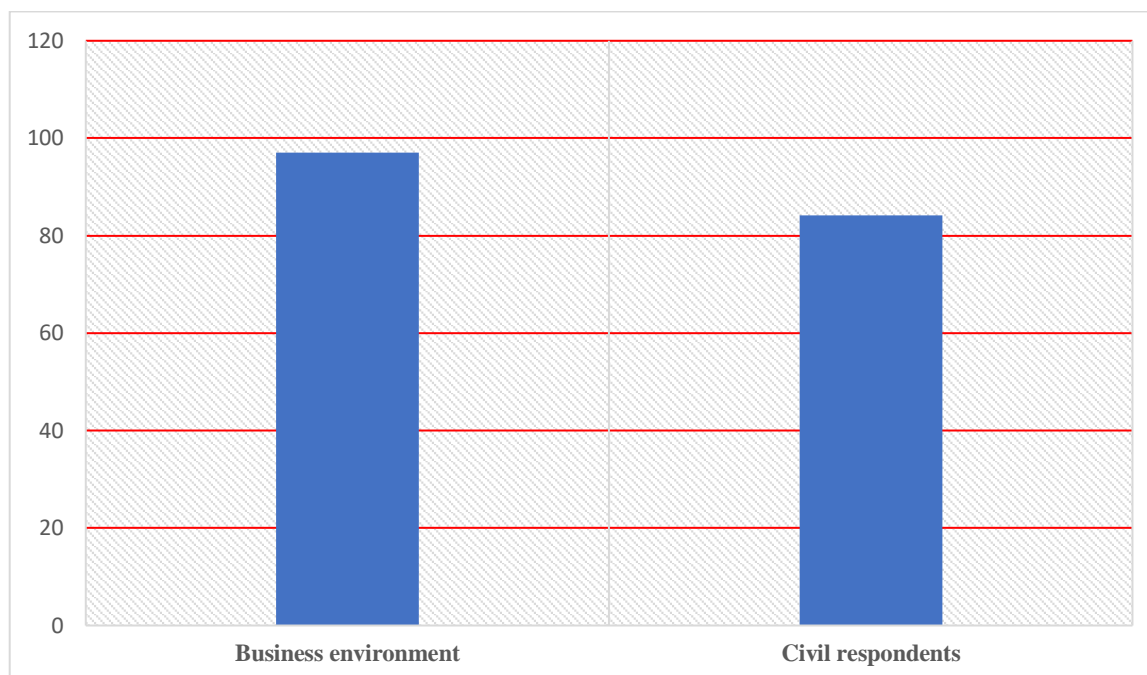


Figure 5: Corruption perception



The National Anticorruption Directorate, the profile institution in Romania involved in the anti-corruption fight, experienced a decrease in the number of people sent to court for committing acts of corruption, including in the health field, between 2016 and 2019. This downward slope was also known in the sphere of the courts, the number of convictions being reduced since 2016, with the exception of 2018, when the number of convicted people is higher than the number of those sent to court. However, the results of judicial activity are among the best, with hundreds of people being convicted for committing one or more acts of corruption, but the increased level of perception of this phenomenon requires an increase in the performance of the judicial system.

In 2016, 1,271 defendants were sent to court (some occupying management, control, public dignities or other important positions) and 879 were definitively convicted (Direcția Națională Anticorupție, Raport activitate 2016 2017).

In 2017, the DNA sent 997 defendants to court (ministers, deputies, senators, secretaries of state, mayors, vice-mayors, magistrates, lawyers, policemen, directors of some public institutions and national companies/society). In the same year, the courts definitively sentenced 713 defendants sent to trial by DNA indictments (Direcția Națională Anticorupție 2018).

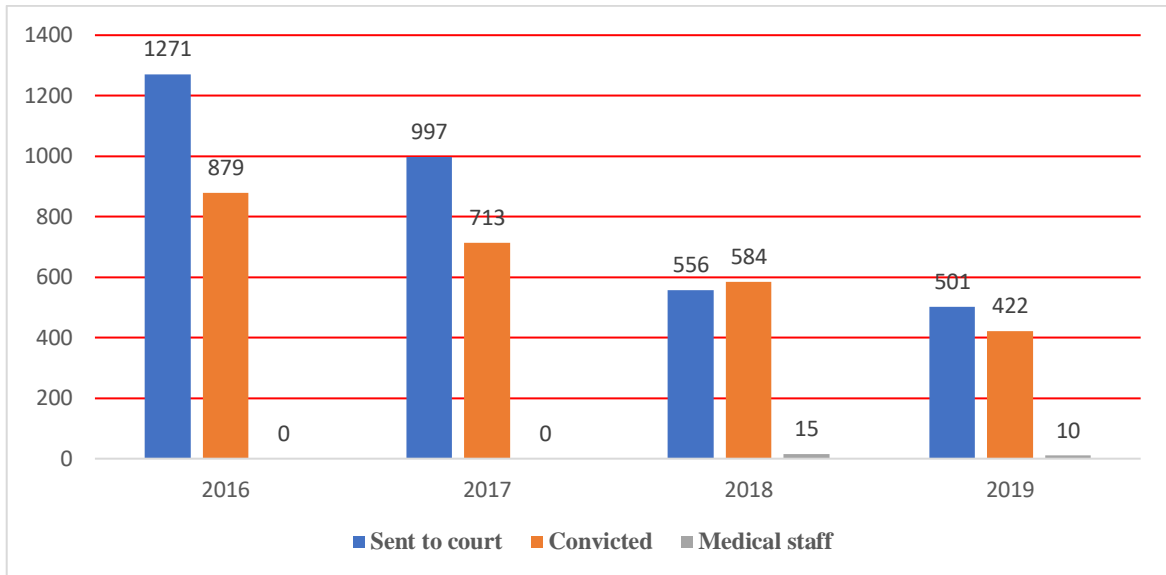
In 2018, the DNA sent 556 defendants to court (minister and deputy prime minister, parliamentarians, secretaries of state, mayors, vice mayors, presidents and vice presidents of county councils, county and local councilors, people with management positions within local authorities, magistrates, lawyers, policemen, directors of public institutions, directors of national companies/societies, hospital managers and doctors, etc.), and the courts definitively convicted 584 defendants (Direcția Națională Anticorupție 2019).

In 2019, the DNA sent 501 defendants to court (ministers, members of the Romanian Parliament, members of the European Parliament, secretaries of state, mayors, vice-mayors, lawyers, policemen, people with leadership positions in local authorities, directors of institutions public and national companies, teachers, hospital managers and doctors, etc.), and the courts definitively convicted 422 defendants (Direcția Națională Anticorupție 2020).

Thus, it can be seen that starting in 2018, people from the medical system, from doctors to hospital managers, started to be sent to court and convicted for committing acts of corruption, which

indicates that other future measures against such people to be known, taking into account the average time required of over one year to complete investigations in such a complex case.

Figure 6: Conviction rate in medical corruption cases



From the analysis of the causes in which corruption investigations were carried out, it emerged that in the period 2016-2020, five areas of manifestation of corruption in the Romanian health system were identified. Thus, we are talking about corruption in: public procurement, medical services, budgeting of hospital units, and staff access to the medical system and authorization of pharmacies.

During the COVID-19 pandemic, the phenomenon of corruption experienced an increase in the field of public procurement and in terms of supplementing medical personnel, employment fraud occurring both in recruitment and selection from an internal source, as well as from an external source.

Thus, the people involved in employment fraud, including the manager of the medical units, received the money personally or through an intermediary, there being pre-set rates for the position to be filled, in the sense that for a caretaker/nurse position the sum of 1500 euros was requested, for an assistant medical 2500 euros, 1000 euros for an ambulance driver and 1000-1500 euros for the position of medical registrar, there are cases where the amounts requested were between 3000 - 5000 euros. With regard to public procurement in the medical system, two ways of manifesting corruption were found, namely conditioning in terms of the awarding, smooth running and timely payment of the contracts that the hospital concluded with commercial companies, for the payment of a "commission" to the manager of the unit, and, respectively, defrauding public procurement procedures carried out by medical units and illegally awarding contracts for works/services/supply of products (Direcția Națională Anticorupție 2020).

Figure 7: Forms of corruption in medical system during COVID-19 pandemic



4. Conclusion

During the Covid-19 pandemic, governments and international organizations dealt with how to control the pandemic faster and how to overcome it and did not pay adequate attention to the avoidance of corruption and to administration. This, in turn, transformed the Covid-19 pandemic into a governance crisis that was beyond a health crisis (Dikmen, and Çiçek, 2020).

Corruption should be addressed as a global public health issue that impacts human development and requires urgent adjustments in legislation, public policies, clinical practices and established priorities. It is the root cause of low efficacy of health interventions, inequity in access, and trust loss in health institutions (Wierzynska, Steingrüber, Oroxom, & Bauhoff, Recalibrating the anti-corruption, transparency, and accountability formula to advance public health, 2020).

Due to corruption in the health sector, there is a significant loss of resources, inadequate medical care, and worse health outcomes (T. Vian, Anti-corruption, transparency and accountability in health: concepts, frameworks, and approaches 2020). Anti-corruption mechanisms should be characterized by independence, impossibility to be manipulated or avoided, as well as generating little or no opportunity to abuse power (Wierzynska, Steingrüber, Oroxom, & Bauhoff, Recalibrating the anti-corruption, transparency, and accountability formula to advance public health, 2020).

Public integrity is key to a resilient response to the COVID-19 crisis, ensuring that government action benefits those in need. This crisis created opportunities for many integrity violations and could intensify fraud and corruption, particularly in public procurement, economic stimulus packages and public organizations. This could significantly undermine government action. Both short-term and long-term measures are needed to address these risks, focusing on procurement strategies, the resources of internal audit functions, and integrity strategies in public organizations, among others, such as maintaining and retaining documentation of procurement processes, ensuring maximum openness of information, including open data, setting up a central price and supplier tracking system for key products and services, using or expanding existing e-procurement platforms, creating digital and easily accessible tools to allow the public to track all emergency purchases, ensuring that the appropriate integrity risk assessments are carried out, review and strengthen existing public integrity systems in public organizations, ensuring core internal controls (OECD, Public Integrity for an Effective COVID-19 Response and Recovery 2020).

Governments should ensure that the cost and quality of the good, service and business procurements in the health sector be monitored and should be sensitive to the crisis. In order to increase transparency, governments should have open contracting and steps should be taken in order to monitor and deter those who employ price gouging, price manipulation, collusion or kickback (Dikmen, and Çiçek, 2020).

To conclude, currently, there is no solid evidence regarding successful strategies to reduce corruption; however, every country affected by COVID-19 must heed the international call, because it is time to make significant changes in global public health, it is time to act against this ignored pandemic, making global approaches based on the best scientific evidence available and backed by international organizations that verify compliance and protection of health systems, guaranteeing the maximum physical and mental well-being of the world population, with or without adaptations according to the social, cultural and political context of each community (Sánchez-Duque, Zhaohui, Rosselli, & Bolaños-Portilla, THE IGNORED PANDEMIC OF PUBLIC HEALTH CORRUPTION: A CALL FOR ACTION AMID AND BEYOND SARS-COV-2/COVID-19, 2021).

References

- (CNSCBT), Romanian National Centre for the Surveillance and Control of Communicable Diseases. *The Prevention and Control of Suspected Infections With the New Coronavirus Within Sanitary Units*. 2020. <http://www.cnscbt.ro/index.php/ghiduri-si-protocoale/1331-prevenirea-si-controlul-infectiilor-suspecte-cu-noul-coronavirus-in-unitatile-sanitare/file> (accessed 10 15, 2022).

- Acemoglu, D., V. Chernozhukov, I. Werning, and M. Whinston. "A Multi-Risk SIR Model with Optimally Targeted Lockdown." *Mimeo*, 2020.
- Achim , Monica Violeta, Viorela Ligia Văidean , and Sorin Nicolae Borlea. "Corruption and health outcomes within an economic and cultural framework." *Eur J Health Econ* 21, 2020: 195-207.
- Al-Zaman, Md. Sayeed. "Healthcare Crisis in Bangladesh during the COVID-19 Pandemic." *Department of Journalism and Media Studies, Jahangirnagar University, Dhaka, Bangladesh*, 2020.
- BioWorld. *Biopharma products in development for COVID-19*. 2022. <https://www.bioworld.com/COVID19products> (accessed Nov 6, 2022).
- Chauvin, L. "Peruvian COVID-19 vaccine scandal spreads. *Lancet*." 2021.
- Cohen, J.C. *Pharmaceuticals and corruption: a risk assessment*. Transparency International Global corruption report 2006, 2006.
- COVID 19 Vaccine Tracker. *VACCINES CANDIDATES IN CLINICAL TRIALS*. 2022. <https://covid19.trackvaccines.org/vaccines/> (accessed nov 6, 2022).
- Cutler, D, and L. H. Summers. "The COVID-19 pandemic and the \$16 trillion virus." *JAMA - Journal of the American Medical Association*, 2020.
- Dascalu, Stefan. "The Successes and Failures of the Initial COVID-19 Pandemic Response in Romania." 2020.
- Dikmen,, S., and H.G. Çiçek,. "Fighting against Corruption and Bribery in Public Procurements during the Covid-19 Pandemic." *R. W. McGee & S. Benk*, 2020.
- Direcția Națională Anticorupție. "CORUPȚIA ÎN SISTEMUL PUBLIC DE SĂNĂTATE." 2020.
- —. *Raport activitate 2016*. 2017. https://www.pna.ro/bilant_activitate.xhtml?id=38 (accessed 02 01, 2023).
- —. *Raport activitate 2017*. 2018. <https://www.pna.ro/obiect2.jsp?id=328> (accessed 02 01, 2023).
- —. *Raport activitate 2018*. 2019. <https://www.pna.ro/obiect2.jsp?id=376> (accessed 02 01, 2023).
- —. *Raport activitate 2019*. 2020. http://www.pna.ro/bilant_activitate.xhtml?id=46 (accessed 02 01, 2023).
- Ellena, K., A. Brown, and C. Dreher. "Preventing government corruption in crises." 2020.
- European Commission. "Study on corruption in the healthcare sector." 2013.
- Farzanegan, Mohammad Reza, and Philipp Hans Hofmann. "Effect of public corruption on the COVID-19 immunization progress." *Scientific reports*, 2021.
- Gallego, JA, M Prem, and JF Vargas. "Corruption in the times of pandemia." 2020.
- Gallego, Jorge, Mounu Prem, and Juan F Vargas. "Corruption in the times of pandemia." 2020.
- Gallego, V, CA Mendez, and Alfonso J Rodríguez-Morales. "COVID-19 in Latin America: The implications of the first confirmed case in Brazil." *Travel Medicine and Infectious Disease* 35, 2020.
- García, P.J. "Corruption in global health: the open secret." *The Lancet*, 2019.
- Guterres , António . *Corruption is the ultimate betrayal of public trust*. octomber 2020. <https://www.un.org/en/coronavirus/statement-corruption-context-covid-19> (accessed 2022).
- Guvernul Romaniei, Ministerul Justitiei. "CAUZELE ȘI FACTORII DETERMINANȚI AI FAPTELOR DE CORUPȚIE." 2020.
- Guvernul României, Ministerul Justiției. *Strategia Națională Anticorupție 2021-2025*. 2017. <https://sna.just.ro/> (accessed 02 01, 2023).
- Hussmann, K. "Addressing corruption in the health sector: Securing equitable access to health care for everyone." *Bergen: Chr. Michelsen Institute*, 2011.
- Jain, A, S Nundy, and K Abbasi. "Corruption: Medicine's dirty open secret." *BMJ*, 2014.
- Kohler , J. C, and T Wright. "The urgent need for transparent and accountable procurement of medicine and medical supplies in times of COVID-19 pandemic." *Journal of Pharmaceutical Policy and Practice*, 2020.
- Lambsdorff, Johann Graf. *How Corruption in Government Affects Public Welfare - A Review of Theories*. 2001.

- Loayza, N., and S. Pennings. "Macroeconomic Policy in the Time of COVID-19: A Primer for Developing Countries." *World Bank Reserch and Policy Brief*, 2020.
- Mackey, Tim K, and Bryan A Liang. "Combating healthcare corruption and fraud with improved global health governance." *BMC Int Health Hum Rights*, 2012.
- Mauro, Paolo . *WHY WORRY ABOUT CORRUPTION?* 1997.
- Mauro, Paolo. *Why worry about corruption.* 1997.
- Naher, N, R Hoque, M Hassan, D Balabanova, A Adams, and S.M. Ahmed. "The influence of corruption and governance in the delivery of frontline health care services in the public sector: A scoping review of current and future prospects in low and middle-income countries of south and south-east Asia." *BMC Public Health*, 2020.
- OECD. "Adaptive Health Financing: Budgetary and Health System Responses to Combat COVID-19." *OECD Journal on budgeting*, 2021.
- —. *Health and Public Procurement.* 2022. <https://www.oecd.org/gov/public-procurement/health/>.
- —. *Initial Budget and Public Managament Responses to the Coronavirus (COVID-19) Pandemic in OECD Countries.* 09 10, 2020. [http://www.oecd.org/officialdocuments/publicdisplatdocumentpdf/?cote=GOV/PGC\(2020\)14&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplatdocumentpdf/?cote=GOV/PGC(2020)14&docLanguage=En) (accessed 2022).
- OECD. "Public Integrity for an Effective COVID-19 Response and Recovery." 2020.
- OECD. "Tackling wasteful spending on health." 2017.
- Rodríguez-Morales, AJ, DK Bonilla-Aldana, R Tiwari, R Sah, AA Rabaan, and K Dhama. "COVID-19, an Emerging Coronavirus Infection: Current Scenario and Recent Developments – An Overview." *Journal of Pure and Applied Microbiology* , 2020.
- Romanian Ministry of Internal Affairs. "Report on the Lessons Learned From the Colectiv Nightclub Fire." 2016.
- Saliba, AN,, and AT Taher. "land in agony: COVID-19, economic collapse, political corruption, and a deadly blast." *American Journal of Hematology*, 2021.
- Sánchez-Duque, Jorge Andres, Su Zhaohui, Diego Rosselli, and Ana M Bolaños-Portilla. "THE IGNORED PANDEMIC OF PUBLIC HEALTH CORRUPTION: A CALL FOR ACTION AMID AND BEYOND SARS-COV-2/COVID-19." *Journal of Experimental Biology and Agricultural Sciences*, 2021.
- Savedoff, W.D., and K Hussmann. "Why are health systems prone to corruption?" *Transparency International - Global corruption report*, 2006.
- Sekalala, S, H Masud, and RT Bosco. "Human rights mechanisms for anti-corruption, transparency and accountability: enabling the right to health." *Global health action 13*, 2020.
- Speck, Bruno Wilhelm. "Controlling Corruption and Promoting Good Governance." *SWP Research Paper*, 2005.
- Transparency International. *Health.* 2021. <https://www.transparency.org/en/our-priorities/health-and-corruption> (accessed 10 19, 2022).
- —. *Whats is corruption?* 2022. <https://www.transparency.org/en/what-is-corruption>.
- United Nations Office on Drugs and Crime. "COVID-19 VACCINES AND CORRUPTION RISKS: PREVENTING CORRUPTION IN THE MANUFACTURE, ALLOCATION AND DISTRIBUTION OF VACCINES." 2021.
- Vian, T. "Anti-corruption, transparency and accountability in health: concepts, frameworks, and approaches." *Global Health Action 13*, 2020.
- Vian, T. "Review of corruption in the health sector: Theory, methods and interventions." *Health Policy and Planning*, 2008.
- Vian, Taryn. "Corruption and the Consequences for Public Health." In *International Encyclopedia of Public Health.* 2008.

- Vlădescu , C., SG Scintee, V Olsavszky, C Hernandez-Quevedo, and A Sagan. "Romania: health system review." *Health Syst Transit*, 2016.
- Wierzynska, A, S Steingrüber, R Oroxom, and S Bauhoff. "Recalibrating the anti-corruption, transparency, and accountability formula to advance public health." *Global Health Action 13*, 2020.
- Williams, Robert, and Robin Theobald. "Corruption in the Developing World." 2000.
- Wood, Danielle, Owain Emslie , and Nathan Blane . "COVID-19: What the states and the territories are spending." *Grattan Institute*, 2020.
- World Health Organization. "Coronavirus Disease 2019 (COVID-19) Situation Report - 67." 2020.
- —. *COVID-19 Virtual Press conference transcript* . January 22, 2021. <https://www.who.int/publications/m/item/covid-19-virtual-press-conference-transcript---22-january-2021> (accessed Nov 6, 2022).
- —. *Global Health Expenditure Database*. 2022. <https://apps.who.int/nha/database/Select/Indicators/> (accessed 10 15, 2022).
- Wrage, A. "Bribery and extortion: Undermining business, governments, and security." *Westport, Connecticut: Praeger Publishers*, 2007.