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RIGHT TO HEALTH IN EGYPT

Health inequity during COVID-19 in Egypt

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This report is published as part of the Arab NGO Network for Development's Arab Watch Report on Economic and Social Rights (AWR) series. The AWR is a periodic publication by the Network and each edition focuses on a specific right and on the national, regional and international policies and factors that lead to its violation. The AWR is developed through a participatory process which brings together relevant stakeholders, including civil society, experts in the field, academics, and representatives from the government in each of the countries represented in the report, as a means of increasing ownership among them and ensuring its localization and relevance to the context.

This 6th edition of the AWR focuses on the Right to Health. The AWR 2023 on the Right to Health is a collaboration between the Arab NGO Network for Development and the Faculty of Health Sciences at the American University of Beirut. Through this report we aim to provide a comprehensive and critical analysis of the status of the Right to Health in the region and prospects in a post COVID-19 era. It is hoped that the information and analysis presented in this report will serve as a platform to advocate for the realization of the right to health for all.

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AMBULANCE
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INTRODUCTION: INEQUITY IN ACCESS TO HEALTH SERVICES IN EGYPT BEFORE COVID-19

On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic. The first case of COVID-19 was diagnosed in Egypt on February 14, 2020. The pandemic coincided with the first stages in implementing the new comprehensive health insurance law, Law No. (2) of 2018, launched in Port Said Governorate in late 2019. It was a time of great economic and social difficulties for all citizens. The government had just implemented the so-called economic reforms agreed upon with the International Monetary Fund (IMF) in November 2016, withdrawing fuel and electricity subsidies and raising transportation prices. Waves of inflation followed and impacted many citizens' livelihoods. In fact, the pandemic began to spread a few months after the IMF's economic reform program ended. The combined impact revealed the structural deficiencies in Egypt's current social and health protection system, discussed later in this report (المبادرة المصرية للحقوق الشخصية 2021).

When COVID-19 reached Egypt, the health sector suffered from insufficient government spending, highlighting an urgent need to restructure the health system. Medical staff worked in abysmal conditions, receiving meager wages. In the last few decades, many left the country looking for better working conditions and opportunities, causing a severe shortage of doctors and nurses.

This report begins with a historical overview of the Egyptian health system and the various incomplete attempts to establish a health insurance system. Then, it analyzes Egypt's health situation before Covid-19 and the government policies to address the pandemic. The report also emphasizes that accessing healthcare was always mired with problems, particularly inequality. The pandemic has only deepened them and brought them to the surface. Finally, the report aims to extract practical lessons from the response to the pandemic, which could help implement the new health insurance law and health reform in general.

METHODOLOGY

The report is based on a literature review of publications published in Arabic and English on the history of Egypt's health system and general challenges and difficulties. It also relies on news and press articles, especially published during COVID-19, population health surveys, in particular, the most recent survey published in 2014, and the Central Agency for Public Mobilization and Statistics reports. The search engines used to review the literature were Google Scholar and PubMed, in addition to the Egyptian press sites. Other sources include reports and data from international institutions such as the World Bank, the WHO, and the United Nations (UN).

The report also incorporates the findings of the latest population health survey in 2021, issued in 2022 but not yet published in full, except for a news release mentioning the preliminary results. Thus, it was not easy to draw conclusions before the entire survey was published.

The primary challenge faced in the development of the report was the outdated health data. For example, the most recent National Health Accounts were done over ten years ago. In addition, the scarcity of gender-specific data in the health sector was also a challenge.

A HISTORY OF EGYPT'S HEALTH SYSTEM AND THE INCOMPLETE ATTEMPTS TO ADOPT AN INSURANCE SCHEME

Egypt's health system is well-established and dates back several decades to the establishment of the modern state during the reign of Muhammad Ali in the nineteenth century. At the time, Egypt's ruler sought to develop public health to serve the army, on the one hand, and to improve the health of human resources in the emerging bureaucratic apparatus, on the other hand.

In 1936, the Ministry of Health was established as a separate ministry after being part of the Ministry of the Interior. Since then, the Ministry of Health and Population has managed the health system through various health directorates across the different governorates (Gad 2022).

Notably, 1964 was a turning point in adopting a health insurance scheme. Two critical laws were issued that year:

- Law No. (75) of 1964 stipulated the provision of health insurance to government employees, public authorities, public institutions, and local administration units. In return, a subscription of 3% of the workers' monthly wages would be paid by the employer (the government) and 1% by workers or employees. Based on this law, Presidential Decree 1209 of 1964 established the General Authority for Health Insurance to implement its provisions.
- A year later, another law was issued to control regulations. Law No. (63) of 1964 applied health insurance to workers in the public and private sectors. They were subjected to the Social Insurance Law in exchange for 4% of the monthly wages paid by the employer in addition to 1% of the monthly wage paid by the worker. The law mandated the General Authority for Social Insurance at the time to implement its provisions; however, its role overlapped with that of the General Authority for Health Insurance. Consequently, Presidential Decree 3298 of 1964 was issued to transfer the responsibility of the General Authority for Social Insurance concerning health insurance to the General Authority for Health Insurance (هيئة التأمين الصحي n.d.).

The 1964 law was part of an attempt by the Nasser regime to establish a health insurance system based on the British

model, where the state controls the service, its facilities, and funding. However, the attempt did not succeed due to financial obstacles. On the contrary, there has been a gradual shift from totally free services to so-called economic services, which entails citizens paying part of the cost upon receiving the service. Private services began to appear in the public system for those who could pay. Their emergence was due to the financial challenges facing the nascent health insurance scheme. Thus, those in charge began seeking other sources of financing to supplement what came from the state's treasury. They chose to provide "distinguished" health services at a fee (Gad 2022).

Another milestone was reached in 1975. Two critical laws were adopted and are still in force today:

- Law No. (32) of 1975 regulated insurance treatment for workers in the government, local administration units, public authorities, and public institutions, to be determined successively by the Health and Population Minister. The law reduced financial burdens on employers from 3% of the monthly wages to 1.5%. It also reduced the burdens on the workers from 1% to 0.5% of the basic wage. On the other hand, it added a small financial contribution from the insured obtaining the service in exchange for the reduction.
- The Social Insurance Law promulgated by Law No. (79) of 1975 adopted five types of insurance: 1) old age, disability, death, and work injury, 2) sickness, 3) unemployment, 4) social care for pensioners, and 5) care for pregnancy and childbirth. The law applies to civil workers in the state's administrative apparatus, public bodies, and institutions. Work injury provisions also apply to workers under 18. The provisions were in return for participating in sickness insurance: the employer pays 3% and the insured 1% of the total monthly wages. Sickness insurance also includes pensioners for 1% of pensioners and 2% of the widows' wages. However, the employer does not pay a share.

In 1992, Law No. (99) introduced a health insurance scheme for students. It applied health insurance to students of all educational levels from kindergarten to secondary school except university, in exchange for 4 pounds per year as a student's subscription and 12 pounds as support from the state's public treasury for each student. Students also contribute to one-third of the price of medicines outside hospitals, except for medicines to treat chronic diseases. The proceeds of a fee of 10 piasters for each pack of 20 cigarettes also went into the fund. In addition to treatment and

rehabilitation services, the law provided the following preventive services: It included a comprehensive medical examination at first enrollment at the start of each educational stage and a qualitative medical examination regularly or for emergency health conditions. It also provided vaccination programs and medical recommendations to the educational authority to provide the necessary health requirements to maintain the level of environmental health, to examine students who practice various activities to determine their fitness to carry out these activities, to spread health awareness among students, and to supervise their nutrition (Nandakumar et al. 2000).

In 1997, the Health and Population Minister issued Decision No. (380) regarding providing health insurance to children from birth to school. Subscription to the scheme involved 5 Egyptian pounds annually and one-third of the price of medicine outside hospitals, except for chronic diseases.

In the 1990s, the Ministry of Health and Population and the donor community initiated health sector reforms to improve indicators and address emerging challenges. The Ministry established the Health Reform Programme, designed to be implemented in 10 to 15 years to shift the healthcare focus from a heavy reliance on "vertical programs" to integrated, less expensive, and sustainable programs based on family doctors and health units (Al Bahnasy 2016). Vertical health programs are a trend in health policy characterized by their specific goals, working on one disease or a small group of health programs and focusing on the short or medium terms. They are administered centrally but separate from the Ministry of Health and Population. The vertical approach is disease-specific, which often makes it easier to get funding.

This pilot reform model relied on primary care/family medicine as a tool for reform and a way to contain escalating health expenditures and reduce out-of-pocket spending. Primary care physicians would handle a large proportion of cases and refer them to secondary and tertiary care levels only when necessary.

However, an evaluation by USAID in 2005 pointed to several weaknesses in the health reform program. These included:

- **Family medicine as the basis of reform:** The model is based on family doctors as an entry point to the system and the first contact between the patient and the service. Family doctors must deal with many cases and refer them to the secondary and tertiary care levels for advanced medical interventions, thus saving money and improving primary healthcare. However, the model is slow in practice.

- **Different needs and expectations for the different population groups (of health service recipients):** Beneficiary satisfaction varied greatly. Patients have often considered specialists to have a higher status than family doctors. One challenge was to convince recipients of the service. Another was the lack of family medicine doctors due to the novelty of this specialization after decades of patients seeking specialists directly.
- **Private sector opposition:** The program did not attract private sector providers as it required investment to convert clinics to a family practice model to obtain accreditation. The private sector was uninterested in the family medicine model, especially after decades of excessive expansion. In addition, the family medicine model would have meant fewer out-of-pocket patients visiting their clinics. Thus, private sector providers risked losing specialized care patients and out-of-pocket profits. This situation exemplified the conflict between the idea of health as a commodity versus health as a right and a public service that must be provided to all regardless of the ability to pay.
- **Financial challenges facing the reform program's continuity and sustainability (Rafeh, n.d.):** The health reform program was piloted in three governorates (Alexandria, Menoufia, and Sohag). However, funding soon became challenging as sponsors failed to create new sustainable funding sources other than international grants. Family health services were funded through traditional public sources, and the poor state budget. The additional costs of operating the family health units and disbursing incentives for service providers were funded entirely by donor grants. Thus, financial sustainability remained a challenge, although the scope of health reforms was small.

However, despite these repeated attempts, attempts to establish a health insurance scheme were inconsistent and lacked complementarity. Almost every decade witnessed a new attempt, but they all lacked the resources, decisions, and directives to carry out the required health reforms. On the other hand, the real political will to deal with health issues and their social determinants was absent. Additionally, actors and stakeholders outside the public health sector had conflicting interests. They depended on out-of-pocket spending as an opportunity to maximize their profits. In general, the matter was not merely technical but also political, linked to the health coverage priorities of various political systems.

THE NEW UNIVERSAL HEALTH INSURANCE SYSTEM: A NEW ATTEMPT AT UNIVERSAL HEALTH COVERAGE

The new universal health insurance system aims to cover all citizens in all stages of their lives, where the state ensures financial protection for those unable to do so. The system was introduced through the Comprehensive Health Insurance Law No. 2 of 2018, which adopts the principle of separation between service providers, financing agencies, and the regulation, accreditation, and quality authority. The law established three principal bodies to manage the new system. It also adopted several mechanisms to measure medical service performance, citizen satisfaction, and quality. The three new bodies created by the law are:

- The Universal Health Insurance Authority (UHIA) responsible for financing and purchasing health services for citizens participating in the scheme.
- The Egypt Healthcare Authority responsible for managing healthcare and services and supervising service providers.
- The General Authority for Health Accreditation and Regulation responsible for monitoring and regulating service quality.

Separating service providers, funding bodies, and accreditation and regulation authorities is a new trend in Egypt's health system. However, it aligns with the global trend toward universal health coverage. The other principle in the new law is the obligation to implement and participate in the new universal health insurance scheme. Furthermore, the law aims to achieve community solidarity, as it is compulsory and prohibits opting out. The new system is based on the following principles:

- Households as the basic unit of coverage.
- Primary healthcare and family medicine as a basic entry point.
- Providing healthcare and treatment services at all three service levels (primary healthcare, the secondary care specializing in diagnosis and treatment and provided in hospitals, and tertiary care specializing in special and advanced cases).

The law was drafted in late 2017 and approved by the House of Representatives. It was ratified by the President of the Republic in January 2018. The universal health insurance law will gradually replace the laws currently in force (over six stages) and within a period of fifteen years.

The new system relies on three primary funding arrangements to ensure its sustainability:

The first includes the contributions of households under its umbrella. Subscription rates are based on heads of households' total income, covering them, their children, and non-working wives. On the other hand, working wives contribute 1% of their income. The whole household contribution is estimated at an average of 6% of the head of the family's total income and 4% paid by the employer, whether in the public or private sector. Thus, the total household contribution for two children and a non-working wife becomes 10%. These contributions are paid by groups who can do so and who work in the public and formal private sectors.

The second includes coverage by the state's public treasury for groups that cannot contribute, based on the percentage of such households and individuals.

The third involves other sources, community financing, fees allocated for health on a package of goods and services for some industries, car extraction fees, road transit fees, and cigarette taxes.

The universal health insurance scheme will be implemented over six stages covering all governorates. The last stage will involve Cairo, Giza, and Qalyubia. The first stage began in July 2019 in Port Said Governorate as a pilot and also involved Luxor, Ismailia, South Sinai, Suez, and Aswan. According to the law's administrative regulations, the six stages will be implemented over 15 years:

1. Stage 1: Port Said, Suez, South Sinai, North Sinai, and Ismailia
2. Stage 2: Aswan, Luxor, Qena, Matrouh, and the Red Sea
3. Stage 3: Alexandria, Beheira, Damietta, Sohag, and Kafr El-Sheikh
4. Stage 4: Assiut, the New Valley, Fayoum, Minya, and Beni Suef
5. Stage 5: Dakahlia, Sharkia, Gharbia, and Menoufia
6. Stage 6: Cairo, Giza, and Qalyubia

However, COVID-19 hit the country only a few months after the pilot in Port Said, and the pandemic's global health, economic, and social consequences slowed the implementation process. The pandemic, unprecedented in 100 years, was a significant challenge, and added to the existing and continuing structural challenges to achieving universal coverage in the next ten to fifteen years.

On the one hand, the scheme still needs work at the primary healthcare level. The scheme still lacks personnel, especially family doctors (one million people may need approximately 100 family doctors at a rate of one per 10,000 citizens), and more family doctors are required to staff the units. Their vital role must be explained to citizens and healthcare workers, especially entry-point doctors. Another challenge relates to digitization on the national level, which includes managing patient data, their full registration (some of which is currently in process), and managing financial claims for service providers according to temporary and final contracts.

THE CURRENT STATE OF EGYPT'S HEALTH SYSTEM

The following section highlights the current structural defects in Egypt's health system, characterized by fragmentation and lack of integration in performance and the organizational structure. This is in addition to fragmentation of the service providers and the dominance of curative services at the expense of preventive and primary care.

Furthermore, according to the constitution, the Ministry of Health and Population is still responsible for public health in Egypt. However, the Health Ministry's performance has revealed several shortcomings. These include weak intermediate administrative cadres, bureaucratic complexity, overcrowding, and extreme centralization. Moreover, the participation of governorate health directorates in decision-making and health policies is limited. Instead, they follow the central instructions from the Ministry's head office in Cairo.

In addition, the healthcare system in Egypt is fragmented and includes multiple actors. Health services are provided by three sectors: the state, the private sector, and charitable organizations.

THE GOVERNMENT SECTOR

The state or government sector comprises ministries funded by the Ministry of Finance, such as the Ministry of Health and Population, with its hospitals and agencies and the Ministry of Higher Education, with its collective hospitals. Various other ministries are also involved, including the Ministries of Defense, Interior, Transportation, Electricity, and others that provide health services to their employees. In the Ministry of Health and Population departments and hospitals, the service could be provided in return for a fee paid by patients when receiving the service. Some departments are self-financed either through patients paying out-of-pocket or having to pay for medical supplies required by the intervention. The above is under the umbrella of the public sector and the regulatory and administrative authority of the Ministry of Health and Population. Below is an overview of the main actors compising the government, or public sector:

- The Ministry of Health and Population has a health directorate in each governorate, headed by a doctor reporting to the minister.
- The General Authority for Health Insurance was established following the Presidential Decree 1209 of1964. It is state-run and supervised by the Ministry of Health and Population to finance and provide health services simultaneously. The authority's budget is deducted from state employee salaries, pensions, the set amount paid by school students, and the state budget allocations.
- The Medical Services Institution has been an economic body under the Health Minister's supervision since 1964 upon the nationalization of some private and community hospitals. It includes a small number of hospitals in Cairo and some other governorates.
- University hospitals are run by the Ministry of Higher Education and funded by the Ministry of Finance. An additional funding source comes from providing paid services to patients, often at a lower price than the private sector. Managed by the Ministry of Higher Education, these hospitals provide advanced medical care and employ highly skilled and trained doctors compared to those from the Ministry of Health.

THE PRIVATE SECTOR

The private sector includes private hospitals, specialized medical centers, laboratories, and pharmacy chains. The private medical sector has spread vigorously in the last twenty years, at least due to the government's reduced spending on health, as detailed below. It should be noted that many public-sector doctors, nurses, and workers also work in private-sector hospitals or clinics, mainly due to the abysmal wages in the public sector.

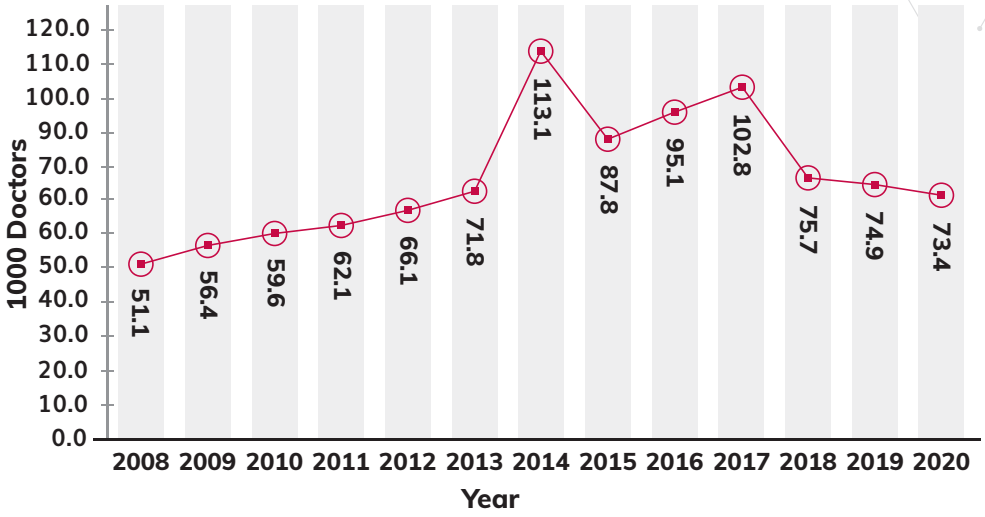
CHARITABLE ORGANIZATIONS

They include religious and non-religious charities.

HUMAN RESOURCES

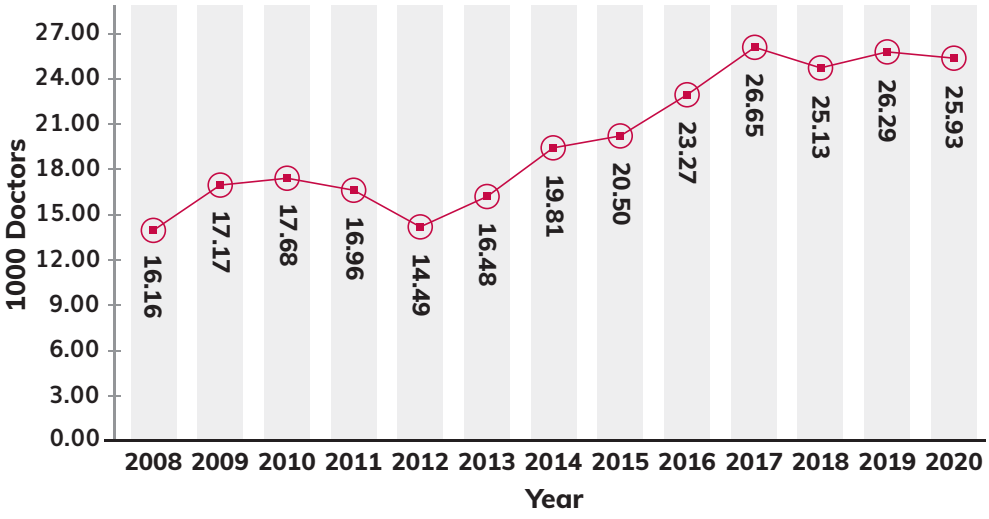
The number of physicians in the government health system increased between 2008 and 2014, then sharply declined, as shown **Figure 1** (2014 and 2020). On the other hand, the number of doctors in the private sector has been steadily increasing since 2012.

Figure 1. Number of doctors in the public sector



Source: CAPMAS

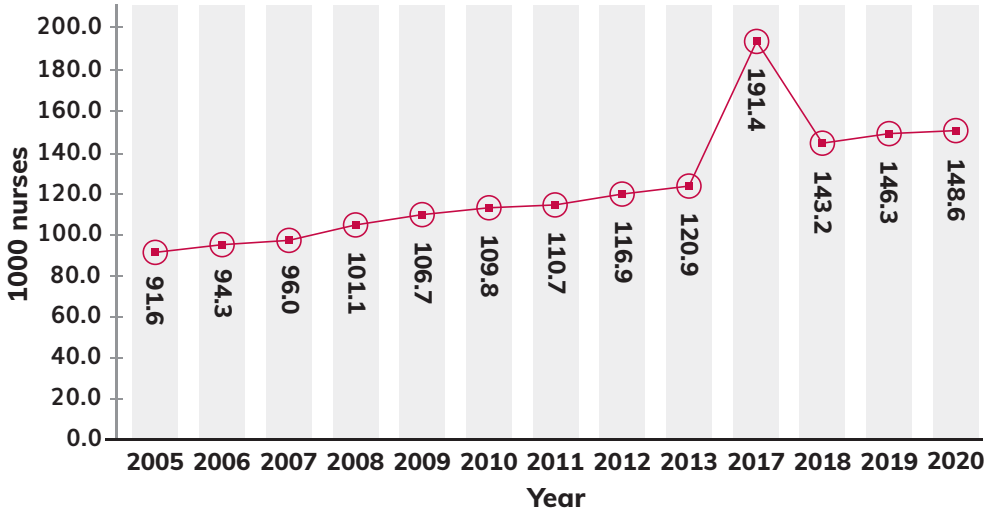
Figure 2. Number of doctors in the private sector



Source: CAPMAS

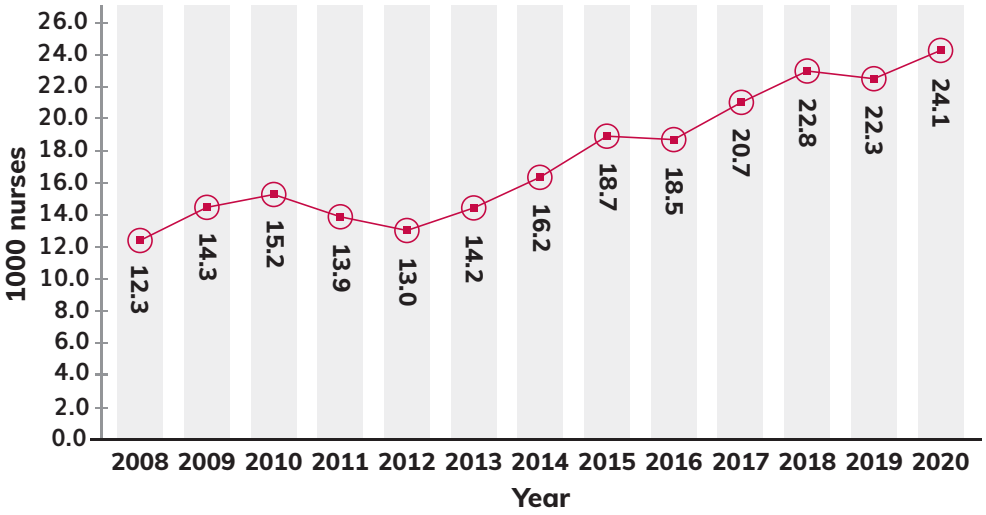
On the other hand, between 2017 and 2020, nursing staff numbers declined in the public sector, and rose in the private sector, as indicated in the following figures.

Figure 3. Number of nursing staff in the public sector



Source: CAPMAS

Figure 4. Number of nursing staff in the private sector



Source: CAPMAS

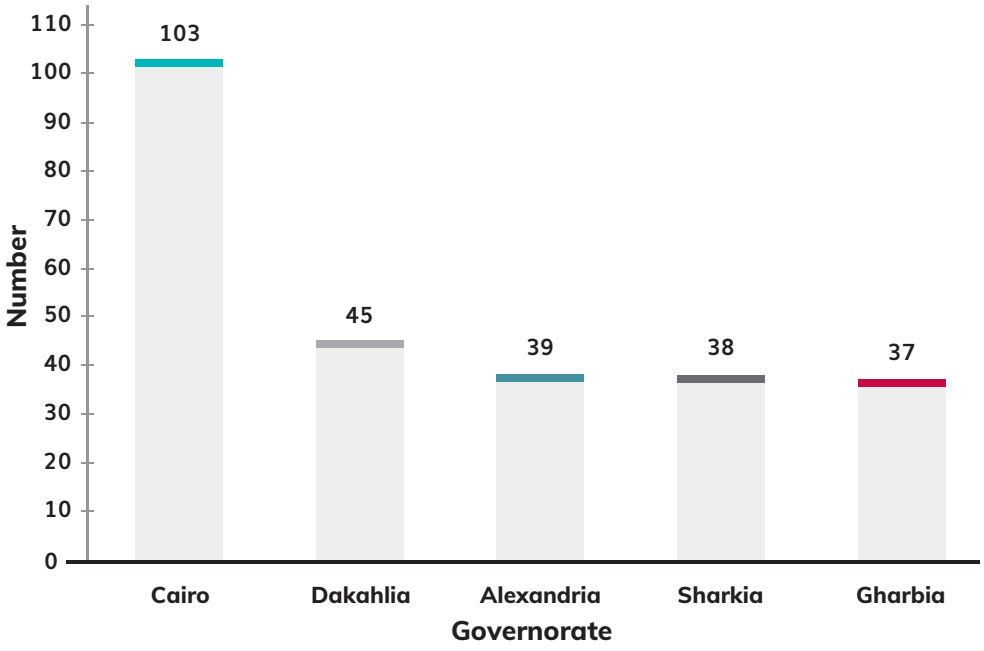
However, workers in the public health sector often have additional jobs in the private sector.

UNIONS OF MEDICAL PROFESSIONS

The Egyptian Medical Syndicate represents Egypt's doctors. It is often considered the most eminent in the medical sector due to having the most powerful voice in discussions related to the health sector. It continuously provides opinions on health developments, sometimes clashing with the Ministry of Health and Population regarding doctors' conditions or decision-making methods. However, the same cannot be said about other health professionals, such as pharmacists, nurses, and laboratory technicians.

Furthermore, Cairo has the largest share of health infrastructure among the various Egyptian governorates. It also has the highest share of health workers. However, the unjust distribution is apparent in the gap between urban capitals and other governorates and between the north and south of the country, in favor of Cairo and the north.

Figure 5. Number of public sector hospitals in the five largest governorates 2020



Source: CAPMAS

Table 1. Healthcare workers distribution in relation to governorates

Statement / Governorates	Health Assistants		Nursing Staff		Dentists		Pharmacies		Human Doctors	
	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males
Total	52	10824	133610	12737	10711	10123	32496	14850	35813	39110
Cairo	-	549	8401	251	1936	1472	2510	499	5684	2849
Alexandria	-	432	3958	102	1314	571	3378	345	2113	936
Port Said	2	80	250	15	26	22	163	36	37	35
Suez	-	21	1346	137	74	76	280	58	239	216
Ismailia	-	135	2029	138	111	136	646	144	254	345
Damietta	19	179	5004	277	327	260	1099	19	815	891
Dakahlia	15	1295	11565	461	1197	1100	4190	1112	5754	6305
Alsharqia	-	890	12911	1101	851	430	4385	2305	4964	3152
Kaliobeya	-	459	6755	19	476	446	1792	729	851	1074
Kafr El Sheikh	5	457	6201	544	336	568	2037	734	1341	1844
Algharbia	-	487	12012	899	665	830	1273	1046	2694	3771
Monoufia	-	744	8414	442	441	758	1659	1862	2557	3586
Albuhayra	-	771	13306	286	294	364	1176	306	1320	2301
Giza	6	335	4872	279	871	620	1697	351	1440	1799
Bani Sweif	-	292	3283	108	134	175	853	290	446	553
Fayoum	2	270	3101	139	264	337	466	553	355	899
Menia	-	709	5247	1038	407	459	1189	616	1042	1735
Asyut	-	845	6967	2969	286	496	793	1393	1326	2191
Sohag	-	576	2931	494	289	303	754	705	1165	1523
Qena	-	205	2953	389	71	153	797	489	308	864
Aswan	-	224	5315	600	71	128	306	178	230	500
Matrouh	3	155	1294	128	52	78	120	125	292	639
Elwady El Geded	-	58	1198	587	45	50	66	41	92	176
Red Sea	-	90	481	114	44	33	244	141	134	173
North Sinai	-	206	2312	655	57	103	145	174	94	259
South of Sinaa	-	123	451	364	23	39	104	202	98	205
Luxour	-	237	1053	201	49	116	374	219	168	289

THE PHARMACEUTICAL SECTOR

Currently, the pharmaceutical sector only does packaging of medicines locally. Any disruption in the import of pharmaceutical raw materials from abroad, whether due to problems in the availability of hard currency or problems in supply chains, such as what occurred due to COVID-19, is considered one of the most important reasons for the occurrence of repeated crises of shortage of medicines and their high prices. The private sector prefers importing manufactured raw materials (production inputs) from abroad. Thus, drug prices are always subject to hard currency fluctuations. According to some estimates, the pharmaceutical sector relies on importing basic materials, manufactured active materials, and the necessary raw materials from abroad, by more than 90%. Thus, any administrative change or financial savings resulting from standardized procurement would not address the root of the problem, which is close to complete dependence on imports (Egyptian Center for Economic Studies 2020).

HEALTH INDICATORS: MANIFESTATIONS OF INEQUALITY AND INEQUITY

Inequality is a prominent feature of the Egyptian health system, specifically with regards to access to health services and shouldering the burden of health spending.

Health protection is an essential component of social protection. Its absence may lead to poverty as a result of the out-of-pocket financial costs incurred by individuals due to illness, especially in cases of catastrophic spending on health.

Reduced government spending on health and excessive reliance on the private sector in providing health services led to a rise of at least 60% in out-of-pocket spending. As a result, the private sector has dominated the market, and health services are becoming more of a commodity.

CHILD AND INFANT MORTALITY RATES

The latest Demographic Health Survey issued in 2014 found the under-five mortality to be 27 deaths per 1,000 births in the preceding five years. At this level, one in every 27 Egyptian children will die before age five. About eight out of every 10 early childhood deaths in Egypt occur before a child reaches one year, and just over half of all deaths (52%) occur during the first months of life.

Table 2 presents neonatal, post-neonatal, infant, child, and under-five mortality rates in the 15 years preceding the 2014 survey. These results indicate the current level of mortality rates and provide an opportunity to assess their development.

Table 2. Neonatal, post-neonatal, infant mortality, child mortality, and under-five mortality rates in the five-year segments preceding the survey in 2014

Years Prior to Survey	Neonatal Mortality	Post-Neonatal Mortality*	Infant Mortality	Child Mortality	Under-Five Mortality
0-4	14	8	22	5	27
5-9	19	11	30	3	33
10-14	19	13	33	7	39

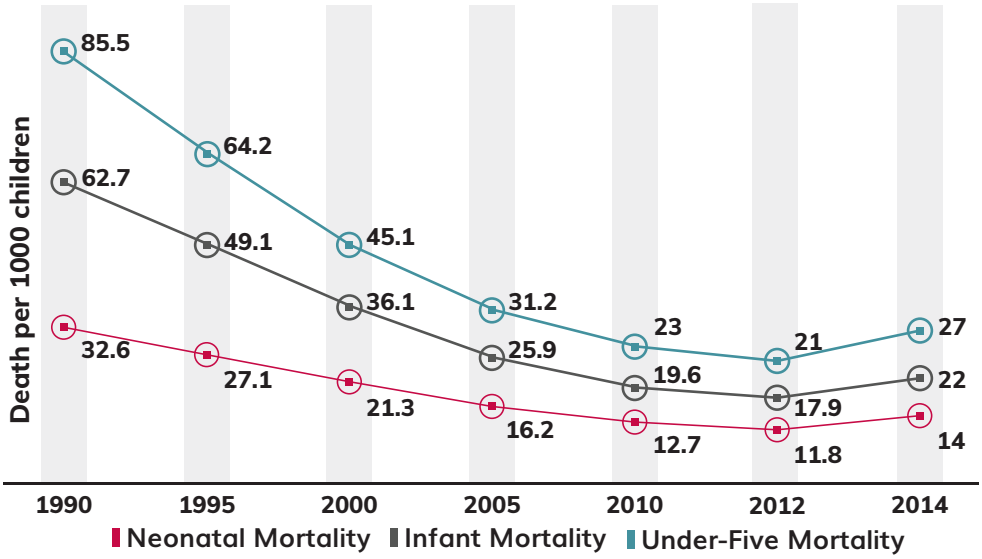
**Calculated as the difference betwen infant mortality and neonatal mortality rates.*

Table 3. Distribution of under-five mortality rates by cause of death between 2000 and 2012

Cause of Death	2000	2012
	As a % of total under-five child mortality	
Prematurity	28	29
Congenital disabilities	12	21
Acute lower respiratory tract infections	15	10
Complications during childbirth	13	13
Diarrhea	9	5
Other reasons	36	35

Source: UNICEF (2014) Children in Egypt: a statistical digest, June 2014, UNICEF Egypt, Cairo, Egypt; World Health Organization (2014), World Health Statistics 2014.

Figure 6. Child mortality rates between 1990 and 2014



Source: UNICEF (2014) Children in Egypt: a statistical digest, June 2014, UNICEF Egypt, Cairo, Egypt; May 2014.

In terms of geographical distribution, urban children are less likely to die at any stage of early childhood than rural children. For example, the under-five mortality rate in urban areas is 23 per 1,000 births, 32% lower than in rural areas, where it is 34 per 1,000 births. In terms of place of residence, the under-five mortality rate was highest in Upper Egypt (38 deaths per 1,000 births) and lowest in urban governorates (20 deaths per 1,000 births).

Similarly, the difference in neonatal mortality between rural and urban areas is significant but not as large relative to the gap in post-neonatal and infant mortality rates.

On the other hand, according to the new health survey, data from 2014 to 2021 indicates the following:

The preliminary results of the latest Egyptian Family Health Survey 2021 indicate that the infant mortality rate during the five years immediately preceding the survey amounted to 25 deaths per 1,000 births. The neonatal mortality rate was 18 cases per 1,000 births, while the post-neonatal mortality rate reached 18 deaths per 1,000 births. However, the post-neonatal rate was seven cases per 1,000 live births. The under-five mortality rate reached 28 cases per 1,000 live births. Infant deaths represent about 89% of child deaths in Egypt, and about 72% of infant deaths occur during the first month after birth.

Compared to the 2014 Survey, the new data indicates an increase in the infant mortality rate from 22 deaths per 1,000 births in 2014 to 25 deaths in 2021. In addition, infant mortality rates during the first month rose from 14 per 1,000 births in 2014 to 18 in 2021. Nevertheless, the mortality rate for children aged 1-4 years decreased from 5 cases per 1,000 births in 2014 to only 3 per 1,000 births in 2021.

Preliminary data showed discrepancies in mortality rates according to the place of residence. The mortality rate for children under five is higher in rural areas than in urban areas and Upper Egypt compared to urban governorates and Lower Egypt (CAPMAS 2021).

WOMEN

Women in urban governorates receive more healthcare during pregnancy than in Upper Egypt and border governorates. However, the latest survey in 2021 indicated that almost 20% of pregnancies in the five previous years were unwanted, and 12% were not wanted at all (CAPMAS 2021).

The following barriers to women's access to healthcare were identified:

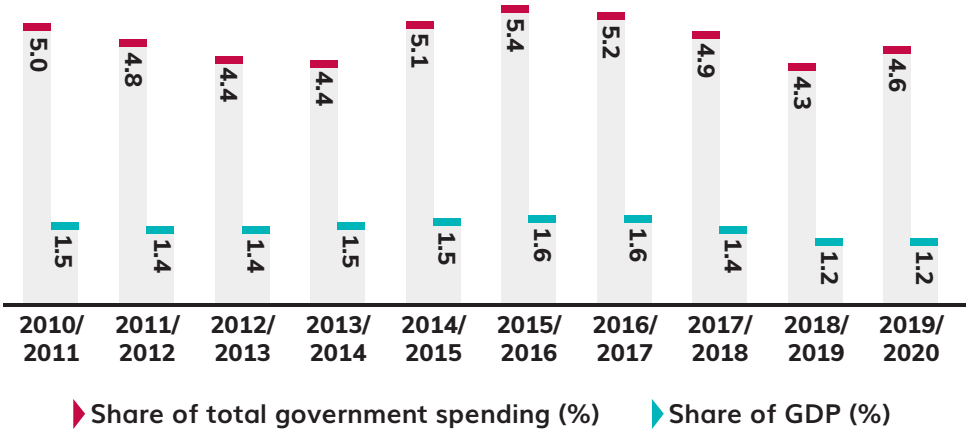
- Medication shortages
- Unavailability of a health service provider
- The distance from the nearest health unit and the need for transportation

GOVERNMENT SPENDING ON HEALTH

According to the 2014 Egyptian constitution, the state must spend at least 3% of its gross national product (GNP) on health. However, despite a health challenge the size of the COVID-19 pandemic in 2021, health was ranked fifth in government spending priorities. Spending on health in 2021 did not exceed 1.5% of the gross domestic product (GDP). **Table 4** shows that government spending on health is declining. The government sometimes adopts an expanded definition of the meaning of general government spending on health. Instead of the calculation being based on allocations that go to the Ministry of Health and Population only, which are less than the constitutional percentage, the government calculates all health expenditures by government agencies from ministries (such as the Ministry of Interior or Oil) and public bodies (whether

service or economic). It also includes spending on providing drinking water and sanitation services (UNDP 2021). Thus, it gets out of the constitutional impasse stipulating spending 3% on health services. However, while sanitation, for example, is linked to the right to health, calculating the expenditures of other government agencies that go to their employees as part of spending on health is an attempt to evade the percentage.

Figure 7. Overview of health financing in Egypt



THE PRIVATE SECTOR RECEIVES THE LARGEST SHARE OF HEALTH FINANCE IN EGYPT

The private sector receives the largest share of health financing. WHO data shows that private spending represents about 71% of the total current spending on health in Egypt, according to 2018 estimates, compared to 29% of government spending on health. The private sector's share of current spending on health in Egypt is higher than the global average of 41%, and higher than that of several other lower-middle-income countries. In the same context, Egypt is considered one of the countries with the highest direct contributions (out-of-pocket spending) to total current spending on health, which amounted to nearly 62% in 2018, close to double the global average.

Table 4. Government spending on health

	2005	2010	2015	2020
Health spending US$ per capita (CHE)	61	107	174	151
Government health spending % Health spending (GGHE-D%CHE)	32.3%	32.9%	31.2%	31.9%
Out-of-pocket spending % Health spending (OOPS%CHE)	64.6%	62.6%	59.5%	59.3%
Priority to health (GGHE-D%GGE)	5.2%	4.4%	5.1%	5.2%
GDP US$ per capita	1.39	2.586	3.252	3.457

Source: World Health Organization Global Health Expenditure Database.

MALNUTRITION

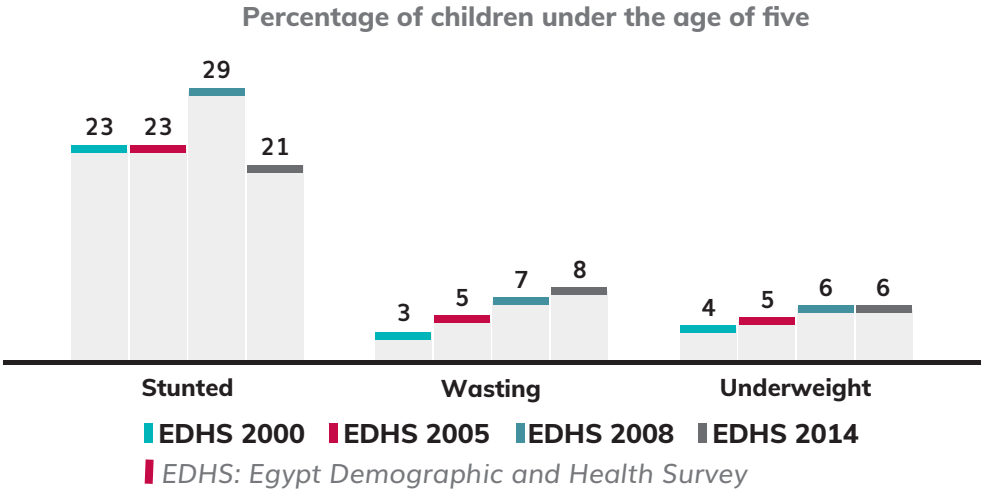
Childhood malnutrition is a persistent problem in Egypt. Malnutrition is the cause of two-thirds of child deaths globally, and Egypt is among the 36 countries where 90% of the global burden of malnutrition is concentrated. Despite a decrease in child mortality in Egypt, malnutrition rates are still high, especially among children under five. Stunting rates among children under five reached 21% in 2014, while rates of wasting and underweight children reached 8% and 6%, respectively. This is in addition to the 'double burden of malnutrition' when undernutrition is coupled with overweight/obesity. The double burden of malnutrition is a significant challenge in Egypt, predominantly obesity and stunting. Thus, appropriate comprehensive measures must be taken to reduce this burden, as 14.2% of children under five are overweight.

Another major challenge is anemia (a deficiency of red cells/hemoglobin in the blood that leads to paleness and fatigue). It affects 27.2% of children under five and 25% of women of childbearing age (15-49 years) (Ministry of Health and Population/Egypt, El-Zanaty and Associates/Egypt, and ICF

International 2015). In addition, more than a third of children and young girls and boys in the age group of 5-19 years suffer from overweight or obesity, and girls in the age group of 5-19 years are more likely to suffer from anemia than boys of the same age group.

Stunting is a sign of chronic malnutrition and varies widely across Egypt. One out of every four Egyptian children suffers from stunting (short stature for their age), while nationally, one in five children under five (21%) is stunted or too short for their age. Among governorates, the percentage of children suffering from stunting ranged from 15% in the three border governorates surveyed to 30% in urban areas of Upper Egypt. Stunting affects children of all income levels, not just the poor. Among the poorest families, we find that 24% of children under the age of five are stunted, which is very similar to the rate of stunting among children in wealthy families (23%). Moreover, the stunting rate remained above 20% between 2000 and 2014, while other measures of malnutrition increased, such as being underweight and thin, which is a sign of severe malnutrition.

Figure 7. Malnutrition among children under five



THE TREND TOWARD VERTICAL HEALTH PROGRAMS

In the few years preceding the pandemic, the Ministry of Health and Population tended to favor vertical health programs (such as the campaign to eradicate Hepatitis C, the women's health campaign, and the campaign for early detection of obesity and malnutrition). Recently, the Ministry launched even more

vertical programs instead of integrating already existing health system functions to implement the first stage of the comprehensive health insurance law: establishing well-equipped basic care units in the governorates.

"Vertical programs" are a trend in health policy. They are goal-specific and address one disease or a small group of health problems, focusing on the short or medium terms. They are administered centrally but separate from the Ministry of Health. The vertical approach is disease-specific, often making it easier to obtain funding and achieve rapid success in dealing with a particular disease. On the other hand, the horizontal approach is more comprehensive and seeks to overcome basic health problems (Cairncross, Periès, and Cutts, 1997).

HEALTH POLICIES AND PROCEDURES APPLIED DURING THE PANDEMIC

The pandemic overwhelmed Egypt's already weak health system and posed a major challenge. The first case of COVID-19 was detected on February 14, 2020. However, the virus quickly spread during March, prompting the Egyptian government to issue a night-time curfew from March to June 2020 (Egyptian Cabinet 2020).

The Ministry of Health and Population relied mainly on public hospitals, specifically fever and chest hospitals, as a front line for dealing with cases. These hospitals served as the first line of defense in dealing with suspected cases and referring confirmed cases to medical quarantine. As the number of cases increased, the Ministry began receiving COVID-19 cases in all of its 320 hospitals.

In April and May of 2020, a sharp increase in cases placed tremendous pressure on public hospitals, which lacked sufficient capacity. The private sector stepped in to provide services and care for COVID-19 patients. However, the cost of private care was severely exaggerated and unaffordable for most citizens. Consequently, the state tried to impose a fixed price on such services, amounting to 10 thousand pounds (roughly 323 USD) per night. However, the private sector refused to comply with Ministry of Health and Population regulations. This behavior went unchecked, and the state did not act to implement the fixed price, most likely because it was not serious about it and did not want to impose any form of regulation on the private sector during the pandemic (Gad 2022).

The state established a higher national committee for the urgent response to COVID-19. Headed by the Prime Minister, the committee reports to the President of the Republic. It is generally responsible for major decisions related to total or partial national-level closures. Furthermore, a medical committee was formed to tackle the medical aspect, supervised by the Ministry of Health and Population, in addition to a scientific committee at the Ministry of Higher Education to set scientific guidelines. The bureaucratic administrative structure above addressed the pandemic's administrative, technical, and political aspects.

However, despite efforts by the Ministry of Health and Population, the response to COVID-19 faced significant gaps and challenges, summarized below.

SHORTAGE OF HEALTH SECTOR WORKERS

The poor distribution of skilled and trained health workers and the low quality of care provided by the public sector are among Egypt's major challenges regarding human health resources. These problems existed before the pandemic, but their effects emerged during the spread of COVID-19. As previously explained about the medical staff's working conditions, most healthcare workers receive meager wages, and there is a mass exodus of doctors and nurses, whether abroad or to the private sector. According to estimates, about half of Egypt's skilled physicians work outside the Ministry of Health and Population. As a result, the quality of healthcare in the public sector is low and deteriorating. Nevertheless, despite its weakness, the government placed the the primary responsibility for treating most infections on the public sector. It should be noted that public sector doctors, nurses, and other public health staff work long hours and face risks of infection and psychological stress. That is, inequality already existed in the sector and was exacerbated by the pandemic.

Furthermore, the state did not provide any financial or moral compensation to the medical staff for their sacrifices during the pandemic. On the contrary, demands to raise salaries to guarantee a decent life were unmet, and health sector workers faced security and administrative restrictions if they expressed their opinions or criticized the government's measures.

Despite the shortage of doctors, health sector workers were subjected to security harassment and administrative abuse in many cases when they expressed their concerns, declared their needs, or criticized the government's handling of the pandemic. The mistreatment ignored the fact that they endured harsh and unfair conditions for more than a year without a break or interruption (Amnesty International 2020).

During the first months of the pandemic, many deaths occurred among health sector workers. Although the government did not disclose the numbers, a WHO representative stated in April 2020 that 13% of COVID-19 infections in Egypt were among medical workers (Ghanam 2020).

Nevertheless, deaths among doctors were documented by the Medical Syndicate throughout the pandemic. However,

there is no information about other health sector workers, including nurses, technicians, paramedics, pharmacists, and administrators. The Ministry continuously failed to document injuries and deaths among medical staff. On the contrary, it ignored the problem and reduced the number of deceased doctors compared to the number recorded by the Medical Syndicate.

As deaths among health workers increased and societal sympathy for their sacrifices grew, there were more demands for the fair treatment of staff who fell victim to the disease. However, the state only slightly increased doctors' salaries to contain the many demands for fair financial compensation.

The Medical Professions Risk Compensation Fund was established under Law No. (184) of 2020 to cover total or partial disability or provide compensation to the families of those who die due to practicing the profession. In contrast to other entitlements from insurance and pensions, it was in the form of a one-time compensation and not a monthly pension. Furthermore, most of the fund's resources are collected from the contributions of members of the medical profession. However, almost two years after the law's adoption, it still lacks precise implementation mechanisms and procedures for victims' families to apply for compensation. It is likely that the law was passed merely to contain escalating demands.

The pandemic also impacted the daily consumption patterns of food and non-food commodities in Egypt. For example, protein consumption decreased by up to a quarter of what it was before the spread of the virus, mainly due to the decrease in household and individual incomes and the rise in food commodity prices (CAPMAS 2020).

TESTING

Another problem related to the COVID-19 response by the Ministry of Health and Population was the lack of PCR tests provided by the government since the onset of the first wave. The Ministry's policy aimed to economize in providing and analyzing tests.

The Ministry's policy of limiting tests hurt health workers, endangering the lives of many of those on the frontline and most vulnerable to infection. These policies also reduced the quality of data on the total number of cases since PCR testing was limited compared to infections. The Ministry also

failed to announce the results of tests conducted outside the government's central laboratories and sub-laboratories in the governorates. For example, tests conducted in university hospitals or private sector laboratories did not make it to the daily count and did not reflect the actual situation.

Some other factors contributed to the inaccuracy of official data on the number of infections and deaths due to COVID-19. Many infected persons chose to conduct blood analyses and chest x-rays in the private sector instead of the PCR test, despite their high cost. Others chose home isolation and treatment by following up with a private doctor without notifying the Ministry of Health and Population.

In terms of the availability of PCR tests, the state prevented private laboratories from conducting them in the first months of the pandemic. It made the service exclusive to the Ministry of Health and Population laboratories (central and subsidiary), providing the test for free but though the number of tests was limited. For those who requested the test for travel abroad and similar reasons, the cost was set at 1,050 pounds (63 USD, according to the exchange rate at the time) and later reduced.

The scarcity of PCR testing characterized the response since the first wave. Eventually, the Ministry of Health and Population allowed the private sector and private laboratories to conduct the tests, but without any regulations, especially with regard to pricing, which varied from one place to another. On the other hand, private laboratories were charging between 1000 to 2000 pounds (60-70 USD) , which is beyond the ability of the vast majority of Egyptians.

VACCINES

Egypt initiated its COVID-19 vaccination campaign in January 2021. However, the campaign was haphazard from its inception. It began without a clear plan and specific timeline for making vaccines available. In addition, effective health communication and awareness mechanisms to announce information on vaccine provision and its importance were absent. For a long time, the Ministry of Health and Population addressed citizens through social media alone. The only source of information about the measures taken by the state to provide vaccines was through television statements by Ministry of Health and Population officials or those in charge of managing the crisis. However, the information was often conflicting (EIPR 2021).

There was no clarity regarding the priority of vaccination groups most at risk of infection, with poor transparency and difficulty accessing information related to vaccination rates among the population.

On the other hand, on the first day of the national COVID-19 vaccination campaign, the Ministry of Health and Population announced that most citizens would have to pay for the vaccine. It was only free for medical staff and those registered in the Takaful and Karama programs, which are social support programs for those in need supervised by the Ministry of Social Solidarity. However, government programs such as Takaful and Karama cover less than 10% of the disadvantaged poor in Egypt, depriving disadvantages citizens who are unable to register or not registered in these programs from accessing vaccines. As a result of broad criticism, the state retracted that step and provided vaccines for free.

The Ministry of Health and Population did not publish vaccination data according to different age groups. There is no data on vaccination rates among the elderly and those with chronic diseases, who are most vulnerable to infection and its complications and have priority in obtaining the vaccine. Announcing these numbers is vital because they indicate the efficiency and fairness of vaccination distribution among citizens (EIPR 2021).

Registration for the vaccine was exclusively through an online portal, and appointments were far into the future. The situation created an obstacle for the elderly with chronic diseases and those unfamiliar with online registration. Vaccination centers were disproportionately distributed among governorates, especially in the south and the Delta, where citizens had to travel a long distance to obtain the vaccine.

Thus, obtaining the vaccine depended on a degree of education and the ability to access the Internet and information due to the Ministry's reliance on a website for registration. A broad segment of citizens unfamiliar with this type of registration method was excluded, mainly from the weakest and most vulnerable groups in society.

On the other hand, pregnant women who wanted to obtain vaccines waited a long time to receive specific recommendations from the Ministry of Health and Population on whether to obtain the vaccine. Again, this failure pointed

to the Ministry's poor communication in conveying health recommendations to citizens.

In some cases, vaccines were distributed based on individual economic and social status, regardless of the order of health priorities. For example, vaccines were distributed to House of Representatives and Senate members after they were given a choice between the Chinese Sinopharm vaccine and the English AstraZeneca vaccine. However, the Ministry of Health and Population announced that citizens do not have the option and shall be vaccinated according to what is available.

Finally, no official information has been announced to this date about vaccine distribution by governorates or gender (EIPR, 2021).

CONCLUSIONS AND RECOMMENDATIONS

- Primary healthcare and family medicine must be given priority as the main factor in the success of the new universal health insurance system.
- Working conditions for healthcare teams must be improved, including a review of the poor salaries, to avoid a severe crisis of medical staff shortage, especially doctors and nursing teams in the whole country, specially in the public health system.
- Strengthen the national pharmaceutical industry and the manufacturing of pharmaceutical materials locally, especially basic and non-patented medicines, to contribute to easing pressure and demand for hard currency, on the one hand, and protect drug prices from supply chain disruptions, on the other. This requires policies and action plans by the state or in partnership with the private sector, aiming to reduce the import of pharmaceutical raw materials, which the Egyptian pharmaceutical industry relies on entirely.
- Promote transparency and disclose information to the community, such as the geographical and gender distribution of vaccines.
- Finally, one of the most important lessons learned from the pandemic is the commitment to implementing the new comprehensive health insurance law and working diligently to complete its three phases to achieve comprehensive health coverage for all Egyptians without discrimination.

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