

Egypt: a primary health care case study in the context of the COVID-19 pandemic

Maha El Rabbat
Mohamed Hassany
Wael Abdel-Razek
Mohamed AbdAllah
Samir El Dmiry
Ahmed Gharib
Soad Abd ElMegid
Marwa Rashad



World Health
Organization



Alliance
for Health Policy
and Systems Research

NOT FOR FURTHER DISTRIBUTION



Egypt: a primary health care case study in the context of the COVID-19 pandemic

Authors:

Maha El Rabbat

Mohamed Hassany

Wael Abdel-Razek

Mohamed AbdAllah

Samir El Dmiry

Ahmed Gharib

Soad Abd ElMegid

Marwa Rashad

Egypt: a primary health care case study in the context of the COVID-19 pandemic/ Maha El Rabbat, Mohamed Hassany, Wael Abdel-Razek, Mohamed AbdAllah, Samir El Dmiry, Ahmed Gharib et al.

ISBN 978-92-4-006414-0

© World Health Organization 2022

(acting as the host organization for, and secretariat of, the Alliance for Health Policy and Systems Research)

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules/>).

Suggested citation. El Rabbat M, Hassany M, Abdel-Razek W, AbdAllah M, El Dmiry S, Gharib A et al. Egypt: a primary health care case study in the context of the COVID-19 pandemic. Geneva: World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/copyright>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

The named authors alone are responsible for the views expressed in this publication.

Contents

Acknowledgments	3
<hr/>	
Executive summary	3
<hr/>	
Introduction and national context	5
Methodology	6
Data collection	6
Documentation review	6
Stakeholder consultations	6
Country context	7
Political commitment and leadership	8
Governance	8
How primary care and essential public health functions are responding to COVID-19	9
Essential public health functions	9
Laboratory capacity	10
Case management and resource allocation	10
Health surveillance and digital services	11
The COVID-19 vaccination programme	11
The PHC response to COVID-19	12
The role of PHC teams	13
Maintaining essential PHC services	14
How multisectoral policy and action are responding to COVID-19	15
<hr/>	
Engaging and communicating with communities effectively and leveraging community resources	18
<hr/>	
Conclusion and lessons learned	19
<hr/>	
References	21
<hr/>	
Annex 1. Opportunities to strengthen PHC systems	24
<hr/>	

Acknowledgements

The primary health care (PHC) case studies in the Eastern Mediterranean Region were commissioned and overseen by the Alliance for Health Policy and Systems Research, a hosted partnership based at WHO Headquarters, and the WHO Regional Office for the Eastern Mediterranean (EMRO). This study was authored by: Maha El Rabbat, Public Health Department, Cairo University; Mohamed Hassany, Ministry of Health and Population (MoHP); Wael Abdel-Razek, National Liver Institute, Menoufia University, and MoHP; Mohamed AbdAllah, Medical Research Division, National Research Center, and MoHP; Samir El Dmiry, MoHP; Ahmed Gharib Abdelrahman, Suez Canal University; Soad Abd ElMegid, MoHP; and Marwa Rashad, Cairo University. The WHO Regional Office for the Eastern Mediterranean, the Egypt Country Office and a team of independent experts provided critical review and input. Special thanks go to Shehla Zaidi and Fadi El-Jardali for their helpful reviews, and Awad Mataria, Hassan Salah, Hagar Azab, Faraz Khalid, Robert Marten, Jeffrey Knezovich, Sonam Yangchen, Alexandra Edelman, Yasmine Yahoum, Ragaa Hassan Abdelwahed, Joanna Fottrell and David Lloyd for their support in the development of this publication.

Executive summary

This case study examines primary health care (PHC) systems in Egypt in the context of the COVID-19 pandemic response between March 2020 and December 2021. Documentation review, stakeholder consultations and focus group discussions were conducted to analyse the response across three PHC components (primary care, multisectoral collaboration and community engagement), as codified in the Astana Declaration (1).

The Government of Egypt adopted a whole-of-government and whole-of-society approach in responding to COVID-19. Robust political leadership and governance, evident from the earliest phases of the pandemic, were key to defining a comprehensive strategy of preparedness and response.

The government worked proactively from very early on in the pandemic – even before the first confirmed case of COVID-19 was reported in February 2020 – to deploy resources and develop infrastructure for preparedness and response. However, greater resources were initially allocated to hospital and critical care. Although integration of PHC systems into the COVID-19 response was eventually pursued alongside efforts to increase surge capacity, earlier integration may have augmented the national strategy. The PHC response strategy was given more prominence over time, with actions that comprehensively advanced public health, primary care and essential and integrated services, and with new models of care implemented for sub-national contexts.

Building on PHC principles, roles and past experiences, primary care facilities were heavily involved in sustaining essential services and in fulfilling new roles for protection, prevention and response. PHC became a cornerstone of efforts to communicate, educate and raise awareness about the pandemic with communities and vulnerable groups. The PHC system was also critical in home-based treatment and follow-up for COVID-19 patients, and in awareness-raising campaigns and implementation of the COVID-19 vaccination programme.

Innovations were adopted as part of the COVID-19 response, for example through segregating care pathways, leveraging telemedicine and engaging in outreach activities using virtual channels. Further, there was integration between primary care and public health efforts, with linkages and referrals across different levels of care.

Multistakeholder collaboration with strong governance and leadership were also essential to support communities and vulnerable groups in tackling the determinants of health and inequities.

The Ministry of Health and Population (MoHP) supported efforts to target vulnerable groups (such as elderly community members and patients with non-communicable diseases (NCDs)) at high risk of COVID-19 infection and

Executive summary

to identify and address their routine medical needs. This was made possible through the Health Information System (HIS) of the MoHP and the baseline data collected through the presidential public health campaign 100 Million Healthy Lives, which enabled essential health service follow-up and provision of specific services. Contextualized messages were sent to the public in both Arabic and English, as well as in sign language. Some of these messages aimed to address rumours and disinformation about the COVID-19 virus, and a wide range of media channels were used to keep populations informed.

The COVID-19 pandemic has provided an opportunity to emphasize the role of PHC in strengthening health systems and in community and multisectoral responses to health emergencies.

Introduction and national context

In public health emergencies, PHC plays a critical role in readiness, preparedness and response at the system and community levels, as well as in ensuring the continuity of essential health care services (2,3). PHC also plays an important role in improving equity, accessibility and community involvement in health care (4).

PHC, as conceptualized in the Astana Declaration, focuses on three critical components: (i) primary care and essential public health functions as the core of integrated health services; (ii) empowered people and communities; and (iii) multisectoral policy and action. This approach reflects the World Health Organization's (WHO) emphasis on whole-of-government, whole-of-society approaches, which were critical in responding to the COVID-19 pandemic.

PHC systems have provided an essential, cost-effective foundation for the global response to the pandemic, acting as a gatekeeper in clinical responses through triage, diagnosis, support to vulnerable populations and reducing demand for hospital services. This is evident in the response, as cities imposed strict control measures, including non-pharmaceutical interventions, and as larger hospitals closed their outpatient departments during periods of increased transmission (5). This study examines PHC systems in Egypt in the context of the COVID-19 pandemic response across the three PHC components of the Astana Declaration between March 2020 and December 2021.

Methodology

Data collection

The study was carried out in two phases. In the first phase, data were collected on the three Astana PHC components through comprehensive documentation review. To validate the key findings of this review and gain additional insights, stakeholder consultations were conducted as a second phase of the study.

Documentation review

A review of relevant documents, policies, reports, plans and programmes was conducted. PubMed and Google Scholar searches were conducted to locate published research papers and reports using the following terms: novel coronavirus OR COVID-19 OR SARS-COV-2 AND primary care OR primary healthcare OR family practice OR essential health care OR community OR outpatient OR ambulatory AND Egypt OR Egyptian OR Nile AND multisectoral OR multisectorality OR social.

The websites of governmental bodies, ministries and public agencies were also reviewed for relevant reports, strategies and documents. In addition, a search of websites of development and intergovernmental agencies was conducted to identify relevant documents, studies and reports. Key media outlets were also consulted to find relevant news articles on the pandemic response at the national/subnational level.

Stakeholder consultations

Consultations were undertaken to validate the findings of the document review, address knowledge gaps and gain insights into the three PHC components, including strengths, weaknesses, opportunities, key barriers, facilitators, and lessons learned.

Consultations were conducted with 10 stakeholders from the Egyptian health sector and related sectors. Additionally, one focus group discussion took place with five key participants from the Port Said branch of the Egypt Healthcare Authority, where universal social and health insurance (USHI) is currently being implemented. Participants were purposively selected to cover the relevant roles within the health system, including MoHP representatives of the PHC, family planning and preventive divisions, and of the USHI programme. Also included were representatives of the Ministry of Social Solidarity, nongovernmental organizations (NGOs), the Ministry of Higher Education and international organizations. The consultations were conducted in person or virtually for around one hour. Data collection took place from June to August 2022.

Country context

Egypt is located in northeastern Africa and has a population of approximately 102 million people. Rural inhabitants slightly exceed urban ones (6).

Life expectancy at birth reached 74.4 years for females and 68.0 for males in 2021 (6, 7). NCDs cause a large burden of illness and death, with ischemic heart disease, stroke and cirrhosis the main causes of mortality (8).

Egypt has thousands of public, parastatal, and private health facilities and hospitals, with about 95% of Egyptians living within 5 km of a PHC facility. The number of PHC facilities has increased over time, reaching 5468 facilities in 2020 from 5103 in 2010. These are organized geographically across urban and rural locations, and function as health offices, clinics, maternal and child health centres, urban health centres, family health centres and units, and rural primary health care units (9). However, this increase in the number of facilities has not kept pace with population growth, and as a result there has been a decline in the number of health care facilities per 10 000 population (10). Data show that there were 0.54 PHC facilities per 10 000 people in 2019 (9). Similarly, although the number of doctors and nursing staff in the governmental system increased to 91 000 doctors and 197 000 nursing staff in 2018, this increase did not match the increase in demand for health services from the growing population (10).

The MoHP is the major provider of preventive care, specialist care and inpatient care. It delivers primary, secondary and tertiary care, with services managed through a variety of entities. Nearly 58% of the population is covered by the public health insurance scheme of the Health Insurance Organization (HIO) (9). At the time of writing, plans were being developed for a universal health insurance system to be implemented progressively, with the aim of covering all Egyptian governorates by 2032 (6).

Private sector hospitals increased by 20% between 2009 and 2019 to reach over 1100 hospitals. This equates to an increase in their market share from around 59% in 2009 to 63.4% in 2019. The number of private beds increased from around 21 000 in 2009 to around 36 000 in 2020, representing a growth rate of about 70% (11).

The Global Health Security Index Ranking for Egypt was 28.0 in 2021, with the country scoring highest in the Risk (60.3) and Norms (33.3) categories, and scoring lowest scores in the Prevent (15.7) and Health (18.8) categories (12).

The first national COVID-19 index case was reported on 14 February 2020. While COVID-19 deaths per 1 million population are lower than best-practice comparators and other countries in the Middle East and North Africa (MENA) region, the fatality rate in the first year of the pandemic was higher than the global average. This may reflect incomplete testing coverage or concentration of testing among those displaying severe symptoms of COVID-19; or it may reflect differences in underlying health outcomes and the prevalence of NCDs (13).

Political commitment and leadership

Egypt has made major strides towards improving health, supported by strong political determination and leadership. Under the leadership of HE President Abd El Fattah El Sisi, several presidential public health initiatives and campaigns have been implemented. Among them is the MoHP-run 100 Million Healthy Lives presidential campaign, through which nationwide hepatitis C and NCD screening was implemented, followed by the implementation of treatment programmes (14).

The government responded flexibly but decisively as the COVID-19 pandemic evolved through 2020 and 2021, and worked to achieve a balanced response with commitment, unity and leadership. Policies were implemented in response to the pandemic, including regulatory measures to limit the spread of the virus and economic support measures targeting specific areas. The latter included health and social protection packages to ensure that support was directed to the most vulnerable groups, including irregular workers (15).

Governance

The pandemic response was governed by the Office of the President through the Higher Committee for the Management of the COVID-19 Pandemic, which had responsibility for overall leadership and oversight of the COVID-19 response including vaccine deployment. The Higher Committee was led by the Prime Minister, alongside the High-Level Oversight Committee (the Cabinet Emergency Operating Centre) headed by the Minister of Health, the COVID-19 Vaccine Scientific Committee and technical working groups.

The High-Level Oversight Committee had overall responsibility for planning, coordination and implementation of the COVID-19 response plan. It comprised senior-level officials from the MoHP, relevant ministries, United Nations (UN) agencies, and representatives from the private sector and civil society organizations (CSOs).

A Higher Virology Committee was also established at the Ministry of Higher Education and Scientific Research, which included specialists and other professionals, to develop guidelines, revise management protocols, report to the Higher Committee and collaborate with the MoHP's Scientific Committee in reviewing case management.

How primary care and essential public health functions are responding to COVID-19

Egypt adopted a phased plan for the health sector's response to the COVID-19 pandemic throughout 2020 and 2021.

According to the MoHP, Egypt has approximately 5468 PHC facilities, with 14 973 general practitioners (GPs) and 256 certified family physicians, 14 000 community health care workers (CHWs), 54 909 nurses, 23 878 pharmacists, 16 202 health educators and more than 1000 mobile clinics. Over 61% of Egypt's PHC facilities have implemented a family practice approach based on formal accreditation (16).

Essential public health functions

Adopting a whole-of-government and whole-of-society approach, COVID-19 was addressed as a multifaceted crisis with wide-ranging and profound health, economic and social impacts.

Measures were introduced to flatten the epidemic curve, prevent transmission and manage cases. With the first wave of the pandemic in 2020, preventive health measures included the suspension of classes at schools and universities; the introduction of work-from-home policies; bans on international air traffic; the closure of places for public gatherings, including mosques and churches; a partial curfew; the adoption of social distancing; and enforcement of face masks, especially in public places and transportation.

Egypt's Acute Respiratory Infection (ARI) Preparedness Plan was first developed in 2007 in collaboration with WHO Egypt (17). It includes five pillars: crisis management; enhancing surveillance systems and contact tracing; case and hospital management; raising community awareness; and quarantine at entry points. The Plan was activated early in 2020, before the introduction of SARS-CoV-2 into the country, and was updated in August 2020. Many of the functions and actions of the five pillars were conducted collaboratively in PHC facilities between the preventive sector, PHC services and the nursing sector.

Laboratory capacity

At the start of the pandemic there was one centralized testing centre, located at the MoHP. This was subsequently increased to 57 testing centres across the country, given the rise in case numbers and demand for testing. In June 2020, the first of many drive-through testing centres opened.

Training was provided to laboratory specialists and technicians at the governorate level in specimen collection, archiving and transfer. Specimens were shared with WHO reference laboratories. The capacity of the Central Public Health Laboratory (CPHL) was boosted through increasing the availability of testing kits to process more than 4000 samples per day. The CPHL has a well-equipped sequencing lab, and is the first ISO 15189-accredited laboratory for COVID-19 testing in the Middle East. However, despite relatively well-developed laboratory networks, some stakeholders consulted in this study felt that testing remained at a lower level than required.

Case management and resource allocation

The MoHP started by preparing 12 hospitals to function as isolation hospitals in several governorates. In time, 27 university hospitals were also designated as isolation facilities, and 47 fever hospitals and 35 chest disease hospitals were designated for the initial examination and referral of suspected COVID-19 cases. Mild cases were isolated and managed in university and youth dormitories. Later, the COVID-19 management protocols were updated to support home isolation. Accordingly, the MoPH initiated a campaign around homecare of home-isolated COVID-19 patients, who were monitored by crisis teams at the governorate level and by a central team.

Procurement and supply chains were organized comprehensively to secure the necessary supplies, including personal protective equipment (PPE) and medical supplies. Treatments were secured and prepared for distribution through medical convoys or for home-isolation cases and contacts (6,18). Testing kits and reagents were secured, and specimens were collected from all suspected cases for testing at regional laboratories in governorates and central laboratories in Cairo. A 200-bed field hospital was set up to compensate for bed shortages (19). Over time, to increase surge capacity, the MoHP designated more than 500 hospitals nationwide for the treatment of COVID-19 patients.

Other stakeholders, including the private sector, were not engaged in the preliminary frameworks or in the response policies in which roles were defined. Later in the pandemic response, the government announced it would allow the private sector to provide paid-for services (20). The private sector cooperated with the MoHP through the reporting to the MoHP central labs of any positive and/or suspected COVID-19 cases, the sharing of protocols with home-isolated COVID-19 cases and the training of health workers. This engagement was supervised by the MoHP.

Stakeholders consulted for this study recommended that greater efforts be made to regulate and integrate all health resources to enhance equity and accessibility to health services during crises.

Health surveillance and digital services

The international health regulation unit at the MoHP was in direct contact with WHO Egypt for daily reporting and the regular sharing of global- and country-level information, updated recommendations and data on viral genetic mutations (6).

The MoHP adopted a set of initiatives to support digital health as part of the COVID-19 response, including the establishment of phone hotlines and the launch of the Sehat Misr (Egypt's Health) mobile application in April 2020, which were accessed by smart phones and included educational guidelines and an interactive service to report suspected COVID-19 cases. The General Authority for Healthcare also developed applications and electronic platforms for reservation and diagnostic services, the home delivery of medicines, remote medical consultations and health guidance (6). A variety of other technological innovations were introduced targeting high-risk groups, such as telehealth for people with COVID-19 and diabetes and a WhatsApp chatbot to support self-management in people with diabetes (21).

The COVID-19 vaccination programme

By January 2020, Egypt had completed a country readiness assessment and developed its National Deployment and Vaccination Plan (NDVP). To ensure fair and equitable access to COVID-19 vaccines to priority population groups, Egypt joined the COVID-19 Vaccines Advance Market Commitment (COVAX AMC) funding instrument in December 2020.

The NDVP was developed in collaboration with WHO, the World Bank and the United Nations Children's Fund (UNICEF), to ensure that the plan and related financing for the deployment, implementation and monitoring of the COVID-19 vaccination process was well-defined (22).

The COVID-19 vaccination programme was initiated on 24 January 2021 with patient-facing health care workers prioritized to receive their vaccination. In March 2021, vaccinations included the second highest priority group, the elderly and people with comorbidities, as they are most at risk. In June 2021, the whole population above 18 years old was included in the vaccination programme. By October 2021, those above 12 years old were also included.

Vaccinations were offered to all people living in Egypt, including refugees, migrants, asylum seekers and foreign residents. Special efforts were made to ensure that the most marginalized groups were aware of their right to be vaccinated and are reached.

The MoHP used multiple channels to enhance and speed up vaccination coverage, drawing on its successful experiences in routine vaccinations. Channels included PHC facilities with trained teams, mobile teams, mobile units, fixed stations in high-density areas and door-knocking initiatives.

The PHC response to COVID-19

The MoHP continued to enhance the role of PHC facilities via its Crisis Management Committee and through its PHC sector, nursing sector and preventive sector. This was achieved through regular communication, supportive and facilitative supervision, whole-site training, efforts to secure stock from the essential drugs list and the allocation of a trained health workforce. PHC facilities stepped up their preparation by strengthening infection control measures, screening clients and prioritizing essential services.

The capacity of health care workers was boosted via online training in several fields. With support from WHO, UNICEF and other UN agencies, several training and capacity-building workshops were organized for all members of the health workforce to address evolving needs, standards of care, management issues, supervision and monitoring. Stakeholders noted that this training programme was supported by virtual PHC planning and management meetings for supervisors and managers; continuous upgrading and standardization of work instructions at PHC facilities; and supervision visits by the central and general directorate of the PHC sector to monitor follow-up activities for home isolation.

New modalities of work and service delivery were developed, including physical distancing and the wearing of masks, improved ventilation and the introduction of hand washing facilities and sanitizers. Waiting areas were redesigned, patient/client flow pathways were reviewed, and staff working hours and rotas were reorganized. Task-shifting was used to manage and reassign the health workforce according to demand. Separate rooms were set up in health facilities for triaging, a proper referral system was implemented, and medicines were dispensed for at least three months (e.g., for NCDs and oral contraceptive methods) to avoid overcrowding. These efforts were strengthened with the development of new roles for PHC teams and facilities, which was especially critical when outpatient services at public hospitals and specialized clinics were transferred to PHC facilities (see below). PHC centres would send high-risk patients suspected of having COVID-19 to a fever or chest hospital for PCR testing and then positive cases would be transferred to isolation hospitals.

PHC facilities worked jointly with community leaders to expand health education, screening, contact tracing and volunteering to develop local isolation sites. They continued to deliver awareness-raising campaigns among communities and with their clients, and they enhanced their communication to provide psychological and mental health support to help people adjust to the “new normal”. An important intervention was the targeting of people who were especially vulnerable to COVID-19 infection or at risk of serious illness with special

messages on behavioural change. Such engagement activities were developed using mobile clinics and existing outreach programmes to ensure the delivery of essential care services.

During 2020, Egyptian pharmacists supported patients in self-care interventions for both acute and chronic diseases (23). Pharmacists also supported patients by delivering counselling on the proper use of medications and devices used for sexual and reproductive health. In some rural areas, pharmacists are vital for isolated patients, especially for the follow-up of cases. Additionally, as private medical clinics were unavailable to many during the early part of the pandemic, patients were able to consult pharmacists regarding their health needs.

The role of PHC teams

To prepare for a rise in case numbers of COVID-19, human resources were reallocated from the PHC and nursing sectors to work at isolation sites and facilities were prepared by mobile teams for both telephone follow-ups and domestic visits to COVID-19 patients isolating at home. Several teams were assigned to each governorate, according to their COVID-19 incidence rate.

PHC teams had a broad set of responsibilities. They cared for people experiencing mild COVID-19 symptoms and provided follow-up care; helped to track and trace confirmed cases; enhanced existing surveillance capacity; and supported vaccination services. PHC teams continuously upgraded and standardized work instructions in PHC facilities in line with pandemic guidelines issued by the government and the General Authority for Healthcare. Primary health workers also conducted health education campaigns in high-population density areas; delivered door-knocking campaigns around COVID-19 vaccination; and undertook online and physical training on standard operating procedures (SOPs) for infection control in PHC facilities.

Approximately 600 emergency teams were established – with at least two teams for each health district at the governorate level – for receiving emergency calls and providing medical help and advice to the public. To aid service delivery, databases and electronic systems were integrated and various applications and electronic platforms were developed. Stakeholders noted that these digital applications facilitated reservation and diagnostic services, the home delivery of medicines, remote medical consultations and the dissemination of health instructions by the General Authority for Healthcare.

Maintaining essential PHC services

The majority of PHC facilities were enhanced to provide essential basic services during COVID-19. The work and functions of PHC facilities were undertaken with utmost care for the safety of patients and the health workforce. These basic services were provided equally to Egyptian nationals and to foreign residents, including asylum seekers and refugees.

A modelling study published in 2020 by the Global Financing Facility reported that the COVID-19 pandemic threatened to disrupt the provision of essential services due to barriers to the supply and demand for services. The modelling indicated that large service disruptions had the potential to leave 2 129 100 children without oral antibiotics for pneumonia; 3 140 900 children without diphtheria, tetanus and pertussis (DPT) vaccinations; 552 200 pregnant women without access to facility-based deliveries; and 3 026 600 fewer women without access to family planning services. The study estimated that due to disruptions in all essential services, child mortality could increase by 21% and maternal mortality by 56% over the following year (24,25).

Stakeholders in the current study reflected that patient flows to PHC services decreased at certain times during the COVID-19 pandemic, most likely due to the restrictions on movement and fears of contracting the virus. In a study of 805 Egyptian mothers of infants from birth to 24 months, 98% reported that PHC centres maintained the same level of competence during the pandemic as before. However, some respondents reported a reduction in resources and 9.7% complained of a lack of availability of vaccines. The study also showed that the pandemic negatively affected adherence to compulsory vaccines: when asked about missing routine immunizations, some respondents expressed a preference to postpone vaccinations until the end of the pandemic (23% of mothers) or expressed their fear of catching COVID-19 (27.2% of mothers). The study found that mothers with higher levels of education skipped routine vaccines less frequently than those with lower attainment levels, and that missing obligatory vaccines might be more common in rural regions (26).

A review of MoHP utilization data for routine PHC services for 2019, 2020 and 2021 revealed an overall reduction in the number of visits with no change in vaccination rates, increased utilization of family planning services, and more visits to dental and emergency services. Child health and repeated visits for pregnancy care show a reduction in the number of visits over time (27). This demonstrates that, even if some services were missed at peak transmission of the virus, catch up does take place, especially when the public has trust in the services available and precautions taken .

Some essential care was continued for other services provided outside PHC facilities, such as HIV/AIDs. For example, stakeholders noted that in the first half of 2020, the MoHP launched a national initiative in collaboration with the National AIDS Programme (NAP) to test pregnant women for HIV, HBV and syphilis at antenatal clinics.

To maintain essential services with safe access to treatments, a multi-month dispensing approach was followed. A one-stop-shop or one-window service was established so that medicines could be dispensed away from the COVID-19 clinics, without needing to access a ticket office or outpatient clinic spaces.

Due to the surge of COVID-19 cases in hospitals, outpatient clinics services were transferred to PHC facilities instead and were provided by specialists. Stakeholders recounted that medicines were supplied and dispensed for three-month periods as needed to guarantee continuity of care and to avoid unnecessary visits to crowded health care facilities. The same system was established for the provision of baby formula. Patients were contacted via SMS, phone or through visits by a CHW.

How multisectoral policy and action are responding to COVID-19

Multisectoral policies (6) and actions were initiated with the support of the Higher Committee. This Committee was headed by the Prime Minister and was endorsed by specific ministers and stakeholders at national and subnational levels.

Egypt dealt with the issue of social protection from a comprehensive, inclusive and targeted perspective, working to empower citizens to access assets and resources at a time of reduced income and rising unemployment levels (6,28). Several multisectoral actions were undertaken and fiscal and social policies introduced to protect the vulnerable and limit the socioeconomic impacts of the pandemic (29). For example, programmes were introduced to support irregular workers, including women, who lost their jobs due to the pandemic. These initiatives reached around 300 000 beneficiaries. Payments were increased to women community leaders in rural areas to enable gender equity; the *Takaful* and *Karama* social protection programmes were expanded to include more beneficiaries (with women already representing 88% of beneficiaries); and it was reported by stakeholders that the Ministry of Social Solidarity cooperated with associations and institutions such as the Egyptian Red Crescent Society to address the repercussions of the pandemic and support the most vulnerable families with cash, health and food assistance, providing services to nearly 29 million families.

Concurrently, the government implemented fiscal stimulus policy measures to several sectors to mitigate the economic impact of COVID-19. These measures included tax breaks and the delayed payment of taxes. Monetary policy response actions were also taken by the Central Bank, including relaxing the loan repayment deadlines for small and medium enterprises through local banks (6,29).

Furthermore, the pandemic triggered a whole-of-government approach to boost national production of supplies, medicines and vaccines and to facilitate imports. This was made possible through the Egyptian Authority for Unified Procurement, Medical Supply and Technology Management (UPA), the Egyptian Drug Authority, the vaccine producer VACSERA, and through coordination with international bodies, including GAVI the global vaccine alliance and the COVAX facility, among others (6).

The government also undertook efforts to integrate the specific needs of women within its COVID-19 response plan. The National Council of Women (NCW) with government partners supported the implementation of mitigation and response policies to ensure the protection of women and girls. These policies sat under the following pillars: impact on human endowment; women's voice and agency; impact on economic opportunities; and promoting data and knowledge (30). The measures and policies consider different groups of women, such as women with disabilities, elderly women and pregnant women. Egypt was one of the first countries globally to develop a mechanism to monitor the policies and measures taken in response to women's needs during COVID-19 (31).

A presidential initiative, Hayah Karima, was reported by stakeholders to have allocated investments to PHC. More than EGP 16 billion was reportedly earmarked to build and renovate around 1274 PHC facilities in the villages supported by the initiative.

International organizations and NGOs streamlined their responses to ensure harmonization with the national-level strategy. For example, the UN in Egypt actively supported national efforts to address and mitigate both the direct and indirect impact of the COVID-19 pandemic, in line with the strategic objectives outlined in the 2018–2022 UN Partnership Development Framework (UNPDF) for Egypt (32). The first plan, led by WHO, is the UN COVID-19 Country Preparedness and Response Plan (CPRP), which aimed to support the government in addressing the direct health measures required in response to the pandemic, as outlined in Egypt's National COVID-19 Preparedness and Responsiveness Plan (39). The second plan is the Socio-Economic Response Plan (SERP), developed by the UN with the purpose of supporting the government in addressing and mitigating the acute socioeconomic impacts of the COVID-19 pandemic on the most vulnerable groups, and informed by a socioeconomic impact analysis (33).

In 2020–2021, UNICEF collaborated with the MoHP to support the COVID-19 response and COVAX vaccination process. Stakeholders recounted that the two agencies partnered to procure vaccines and hygiene materials, train service providers and implement community outreach activities to increase awareness and accessibility to services. Support was also provided for the refugee community through the training of 190 Syrian CHWs on protective practices against COVID-19, with the potential to reach more than 7000 refugee families to raise their awareness. Refugees were integrated in all services provided in Egypt, with the UN High Commissioner for Refugees (UNHCR) noting in March 2021 that the agency's cooperation with the MoHP was "excellent and ongoing" (34).

Engaging and communicating with communities effectively and leveraging community resources

To improve community awareness, several information campaigns were implemented, beginning with the Stay Home campaign, which was followed up by a set of digital initiatives. For example, the Information and Decision Support Center (IDSC), under the Cabinet, launched a dedicated government website, Egypt Cares, with all available information related to COVID-19. It also communicated the government's efforts to address the pandemic; however, several stakeholders consulted for this study thought that the messaging could be interpreted in different ways and that it did not always respond directly to the concerns of the public.

A package of risk communication and community engagement resources was developed, implemented and widely disseminated with the support of the government, the MoHP, NGOs and UN agencies (35). This prioritized: maintaining two-way communication with audiences to understand and respond to their concerns, attitudes, beliefs and barriers to following health guidance through mechanisms; engaging with trusted influencers, particularly health care workers, to communicate with affected populations, especially hard-to-reach ones; and addressing infodemics. By December 2020, activities took place to address the "new norms" and empower the community and health care workers. This included awareness campaigns on COVID-19 targeting rural communities and covering topics such as preventative measures against the pandemic during agricultural/food production (36).

Variations were perceived in outreach activities between governorates, as seen in varied availability of programmes and resources delivered by NGOs. Stakeholders consulted for this study recommended that an assessment and evaluation framework be implemented to evaluate implementation of the various outreach activities and to detect gaps that could inform future responses.

Communication and community engagement teams worked to increase public trust in the safety and effectiveness of the vaccines and to address the infodemic. They informed the population of the vaccination deployment plan, including target groups, vaccination centres and vaccination timing.

Spokespeople provided media updates on the epidemiological situation, policies, resource sites and the latest data. They urged people to comply with the protective measures and public restrictions, the reporting of positive cases and safety precautions, including by stressing the importance of vaccination.

At the PHC level, CHWs and mobile teams from PHC facilities formed an integral part of the communication and health education plans for on-site and outreach interventions, which were extended via the school health programmes and their related outreach activities.

Stakeholders reported that the PHC Facilities Board was activated in the governorate of Port Said, where Egypt's new social and health insurance programme was already being implemented, and that this included representatives of the local community. This approach enabled the involvement of the community in particular actions and decision-making, while also facilitating the identification of local vulnerable groups and allowing bidirectional communication.

In support of vaccination campaigns, the Egyptian Red Crescent Society, through its 2000 trained volunteers, developed a mechanism to assess societal health risks and the infodemic through a hotline, a specialized webpage, and a suggestions/complaints box located in medical centres and on medical convoys. In addition, stakeholders noted that the partnership between the government, UNICEF Egypt and the WHO Egypt Office was strengthened to increase awareness of the mechanisms available to monitor rumours and to promote health awareness and information related to COVID-19 and available vaccines through the Rapid Pro programme of the MoHP.

Finally, governors and local government units were tasked with enforcing public health regulations and procedures to control the pandemic within their jurisdictions. This included the enforcement of the curfew, controlling traffic flow, monitoring local health sector response efforts and ensuring the effective implementation of procedures approved by the Higher Committee across the country's governorates (37).

Conclusions and lessons learned

The Government of Egypt adopted a whole-of-government and whole-of-society approach in responding to the COVID-19 pandemic throughout 2020 and 2021. Robust political leadership and governance, which were evident from the earliest phases of the outbreak in 2020, were key in defining a comprehensive preparedness and response strategy.

The Government of Egypt worked to deploy resources and develop preparedness and response activities. Initially, hospital and critical care services were prioritized. Efforts were made to increase surge capacity and a greater focus was placed on PHC in the response strategy over time to advance public health, and to maintain PHC and essential and integrated services. New models of care were also introduced for subnational contexts.

PHC facilities were heavily involved and engaged in communication, education and awareness-raising about COVID-19, including on transmission, protection, roles and responsibilities. Different communication channels were used to reinforce and emphasize the importance of screening and early detection and isolation of positive cases. The findings of this case study suggest that the provision of essential PHC services was successfully maintained throughout the pandemic in 2020 and 2021. A key enabling factor was a foundation of trust between CHWs and their communities.

The health workforce was at the centre of the pandemic response strategy. While there was public concern about medical staff who contracted COVID-19 during their work, the risks to health sector staff were reduced through investments in PPE and strengthening infection and control measures in health facilities.

Innovations to control the spread of the virus included segregating care pathways, leveraging telemedicine and engaging in outreach activities conducted through virtual channels. Further, the PHC sector developed measures to integrate primary care and public health efforts, with linkages and referrals across different levels of care.

The targeting of vulnerable groups and identification of their health needs was supported by the MoHP HIS and baseline data collected by the 100 Million Healthy Lives campaign and other public health campaigns. This formed the basis for the follow up of essential health services and the provision of specific services to at-risk groups.

As the pandemic progressed, high workloads of PHC staff gradually improved alongside the systematization of home-based care. At times the referral system

was weak between different levels of care. There was low social acceptance of and stigma directed at health workers, particularly in the early stages of the pandemic when little was known about the virus. Health care workers suffered mental health problems due to high workloads and challenges associated with movement restrictions. Linkages were sometimes weak between the MoHP and NGOs, and plans of action were late to include different stakeholders, for example from the private sector.

Key several strengths of the response included PHC teams' awareness of the needs of vulnerable populations; the introduction of grievance mechanisms for patients to submit feedback and complaints; and the continuous training of health workers via YouTube and other digital tools, to keep pace with changes in management protocols.

The COVID-19 pandemic has provided an opportunity to strengthen PHC within Egypt's health system, in line with the 2018 Astana Declaration. This is especially important given efforts to deliver UHC and principles of fairness, which are particularly relevant in health emergencies. Key opportunities to strengthen PHC systems, relating to governance, service delivery, data, and community engagement, are listed in Annex 1.

Reflecting on the multisectoral nature of the COVID-19 response, there is an opportunity for greater emphasis to be placed in all divisions of the government on moving beyond health policy to *healthy* public policy. Effective pandemic preparedness and response is likely to require adaptability to local health needs and contexts.

References

1. Declaration of Astana. Global Conference on Primary Health Care, Astana, Kazakhstan, 25–26 October 2018 (<https://www.who.int/publications/i/item/WHO-HIS-SDS-2018.6i>).
2. Strengthening the frontline: how primary health care helps health systems adapt during the COVID-19 pandemic. OECD Policy Responses to Coronavirus (COVID-19). Paris: Organization for Economic Cooperation and Development (OECD) Publishing; 2021 (<https://doi.org/10.1787/9a5ae6da-en>).
3. From Alma-Ata to Astana: primary health care – reflecting on the past, transforming for the future. Geneva: World Health Organization (WHO); 2018 (<https://apps.who.int/iris/handle/10665/345685>).
4. High-level event: the role of primary health care in the COVID-19 pandemic response and leading equitable recovery. UHC Partnership; 22 June 2021 (<https://www.who.int/news-room/events/detail/2021/06/22/default-calendar/high-level-event-the-role-of-primary-health-care-in-the-covid-19-pandemic-response-and-leading-equitable-recovery>).
5. Role of primary care in the COVID-19 response: WHO interim guidance. Manila: WHO Western Pacific Region; revised and republished 9 April 2021.
6. Egypt Human Development Report 2021. Cairo: United Nations Development Programme (UNDP) Egypt; 2021 (<https://www.undp.org/egypt/egypt-human-development-report-2021>).
7. Egypt family health survey 2021. Cairo: Central Agency for Public Mobilization and Statistics (CAPMAS); 2022 (https://www.capmas.gov.eg/Admin/News/PressRelease/20229593732_%D9%85%D8%B3%D8%AD%20%D8%B5%D8%AD%D9%89%20_%20%D8%A7%D9%86%D8%AC%D9%84%D9%8A%D8%B2%D9%89.pdf).
8. El Sood HA, Abu Kamer SA, Kamel R, Magdy H, Osman FS, Fahim M, et al. The impact of implementing the Egypt pandemic preparedness plan for acute respiratory infections in combating the early stage of the COVID-19 pandemic, February-July 2020: viewpoint. JMIR Public Health Surveillance. 2021;7(5):e27412. doi: 10.2196/27412.
9. Statistical yearbook (Isdaratsanawia) [in Arabic]. Cairo: CAPMAS; 2021 (https://www.capmas.gov.eg/Pages/Publications.aspx?page_id=51046Year=23570).
10. World Bank database. Washington (DC): World Bank; n.d. (www.worldbank.org).
11. Why is the private sector pouring money into healthcare in Egypt? Enterprise Press; 26 May 2021 (<http://enterprise.press/handhats/private-sector-pouring-money-healthcare-egypt>).
12. 2021 GHS Index country profile for Egypt. Washington (DC): Global Health Security Index; 2022 (<https://www.ghsindex.org/country/egypt/>).
13. Egypt: noncommunicable diseases. Cairo: WHO Regional Office for the Eastern Mediterranean Region; n.d. (<http://www.emro.who.int/egy/programmes/noncommunicable-diseases.html>).
14. Hassanin A, Kamel S, Waked I, Fort M. Egypt's ambitious strategy to eliminate hepatitis C virus: a case study. Global Health: Science and Practice. 2021;9(1):187–200. doi: 10.9745/GHSP-D-20-00234.
15. COVID-19 and the world of work: country policy responses – Egypt. Geneva: International Labour Organization (ILO) (<https://www.ilo.org/global/topics/coronavirus/country-responses/lang--en/index.htm#EG>).

16. Government of Egypt, statistical yearbook 2016. Cairo: CAPMAS (<https://www.capmas.gov.eg/>).
17. Preparedness plan for pandemic influenza 2018–2019. Cairo: MoHP Preventative Sector; 2017 (http://www.emro.who.int/images/stories/csr/documents/nipp-egypt-english_final_dec_2018.pdf?ua=1).
18. Abu El Sood H, Abu Kamer SA, Kamel R, Magdy H, Osman FS, Fahim M, et al. The impact of implementing the Egypt pandemic preparedness plan for acute respiratory infections in combating the early stage of the COVID-19 pandemic, February–July 2020: viewpoint. *JMIR Public Health Surveill.* 2021;7(5):e27412. doi: 10.2196/27412.
19. Daily COVID-19 roundup: June 7. Cairo: Mada Masr; 7 June 2020 (<https://madasr.com/en/2020/06/07/feature/politics/daily-COVID-19-roundup-june-7/>).
20. Ghannam A, Sebae A. Healthcare protection policies during the COVID-19 pandemic: lessons towards the implementation of the new Egyptian Universal Health Insurance Law. *Social Protection in Egypt: Mitigating the Socio-Economic Effects of the COVID-19 Pandemic on Vulnerable Employment.* Cairo: The American University in Cairo; 2020 (https://fount.aucegypt.edu/faculty_journal_articles/876).
21. Goodyear-Smith F, Kidd M, Oseni T, Nashat N, Mash R, Akman M, et al. International examples of primary care COVID-19 preparedness and response: a comparison of four countries. *Family Medicine and Community Health.* 2022; 10(2):e001608. doi: 10.1136/fmch-2022-001608.
22. Egypt's national deployment and vaccination plan for COVID-19. Unpublished data. Cairo: MOPH, 2022.
23. El Bizri L, Jarrar LG, Ali WKA, Omar AH. The role of community pharmacists in increasing access and use of self-care interventions for sexual and reproductive health in the Eastern Mediterranean Region: examples from Egypt, Jordan, Lebanon and Somalia. *Health Res Policy Sys.* 2021;19 (Suppl 1):49. doi: 10.1186/s12961-021-00695-0.
24. Hassany M, Abdel-Razek W, Asem N, Abdallah M, Zaid H. Estimation of COVID-19 burden in Egypt. *Lancet Infect. Dis.* 2020; 20:896–897. doi: 10.1016/S1473-3099(20)30319-4.
25. Preserve essential health services during the COVID-19 pandemic: Egypt. Washington (DC): Global Financing Facility, World Bank Group; 2020 (https://www.globalfinancingfacility.org/sites/gff_new/files/documents/Egypt-Covid-Brief_GFF.pdf).
26. Mahfouz NN, Ali WH, El Wakeel MA, Rabah TM, Elmowafi AA, Kamel IH. Adherence to compulsory vaccination during Coronavirus disease-19 pandemic in Egypt. *Open Access Maced J Med Sci.* 2021 Apr 29;9(A):1–5. doi: 10.3889/oamjms.2021.6046.
27. Utilization data for routine PHC services, 2019, 2020, 2021. Unpublished data. Cairo: MoHP, 2022.
28. COVID-19 Government of Egypt measures observatory. Cairo: Ministry of Planning and Economic Development; n.d. (<https://policytracker.mped.gov.eg/>).
29. Egypt: 100 days fight against COVID-19. Cairo: Information and Decision Support Centre (IDSC).
30. Egypt's rapid response to women's situation during COVID-19 outbreak. Cairo: National Council for Women, in consultation with the World Bank, UN Women, United Nations Population Fund (UNFPA), United Nations Office on Drugs and Crime (UNODC) and ILO; 2020. (<https://policytracker.mped.gov.eg/>).

References

31. Egyptian women: 6 years of achievements – efforts to empower Egyptian women 2014–2020. Cairo: National Council for Women; 2021.
32. United Nations Partnership Development Framework (UNPDF) 2018–2022. Cairo: UN Egypt; 2018 (<https://egypt.un.org/en/24330-united-nations-partnership-development-framework-unpdf-2018-2022>).
33. Egypt COVID-19 response and recovery interventions of the United Nations in Egypt. Cairo: United Nations Egypt; 2020 (<https://egypt.un.org/sites/default/files/2020-09/COVID%2019%20Egypt%20Final.pdf>).
34. Beshay, C. UNHCR Egypt Supports Egypt’s Ministry of Health’s National COVID-19 Response. UNHCR. 11 March 2021. Available at: <https://www.unhcr.org/eg/19963-unhcr-egypt-supports-egypts-ministry-of-healths-national-covid-19-response.html>
35. UN-CPRP quarterly report, July–September 2020. Cairo: UN Egypt; 2020.
36. FAO in Egypt: awareness campaigns. Cairo: FAO Egypt; n.d. (<http://www.fao.org/egypt/resources/covid19-awareness-campaign/en/>).
37. Abdel-Fattah D. Daily commuters in Egypt during the Covid-19 pandemic. Economic Research Forum, 27 May 2020 (<https://theforum.erf.org.eg/2020/05/20/daily-commuters-egypt-covid-19-pandemic/>).

Annex 1. Opportunities to strengthen PHC systems

Governance

- Political support endorsing PHC could be built upon to prioritize and increase investments. There is an opportunity for the role and importance of PHC to be emphasised as the cornerstone of health system strengthening and to build resilience for emergency capacity. This is likely to require reform of financing mechanisms and budgets, adoption and institutionalization of PHC in all health system policies and legislation, and the optimized distribution of PHC services at the national level to meet urban and rural needs.
- There is an opportunity for health systems to be reoriented towards promotion and prevention, and to become person- and community-oriented.
- To support decision-making processes, an integrated information system could be established that links all levels of care with determinants of health. Feedback loops could be built in to ensure issues of relevance are addressed. This is likely to require looking for linkages between the three components of PHC and drawing multisectoral pathways to strengthen sectors and approaches. Efforts could span water, sanitation and hygiene (WASH), and climate change, the One Health approach, addressing inequities and education.

Service delivery

- There is an opportunity to strengthen human resources policies and strategies to align with the evolving health needs of a growing population and changing health system priorities.
- A well-functioning procurement and supply chain could be strengthened to improve operability of supply mechanisms to PHC facilities according to need. Through needs assessments and prediction models for forecasting, essential service provision can be sustained.
- The effectiveness of initiatives and models of service delivery adopted by the PHC system in response to the pandemic can be assessed, evaluated and documented. Successful initiatives could be maintained and scaled up to help build resilience for future public health emergencies.
- Innovations such as digitalized services (e.g. telemedicine) and home visits could be expanded and institutionalized to enhance service provision. Mechanisms could be established to institutionalize these service models, including developing guidelines and SOPs and training for the health workforce.
- A comprehensive review could be conducted of health system strengthening activities, including those related to financing activities, information systems, human resources, governance, and the provision of health products and essential medicine.

- There is an opportunity to recognise the importance of mental health support and services in future preparedness and response plans for health emergencies, especially for health care workers.
- Post-COVID-19 follow-up care and treatment might need more attention and investment going forward.

Data

- There is an opportunity to establish a monitoring framework to generate data for PHC assessment.
- Current knowledge could be advanced by strengthening research and development to fill knowledge gaps and generate data and evidence that support the orientation of PHC functions towards the needs of people and communities. Collaboration between practitioners and academia is important to support research and development.
- Data on the epidemiological situation in the country and health system capacities could be updated more frequently.

Community engagement

- There is an opportunity to develop guidelines and frameworks to ensure continuous integration of community engagement as a central component of a PHC approach to improve the accountability, empowerment, participation and responsiveness of the PHC system.
- Existing channels to improve community engagement and representation could be expanded and used to provide feedback (including via clear grievance mechanisms) to improve transparency and accountability and to increase public trust in the health system.
- The role of actors beyond the public sector could be specified, regulated, enhanced and strengthened in coordinated partnership with the PHC system.
- There is also an opportunity to strengthen mechanisms to promote social inclusion, decrease disparities and reduce impact on vulnerable groups.



**World Health
Organization**





Egypt: a primary health care case study in the context of the COVID-19 pandemic

This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, in collaboration with the WHO Regional Office for the Eastern Mediterranean (EMRO) and WHO country offices. In 2015, the Alliance commissioned the Primary Health Care Systems (PRIMASYS) case studies in twenty low- and middle-income countries (LMICs) across WHO regions. This case study builds on and expands these previous studies in the context of the COVID-19 pandemic, applying the Astana PHC framework considering integrated health services, multisectoral policy and action and people and communities. This case study aims to advance the science and lay a groundwork for improved policy efforts to advance primary health care in LMICs.

9789240064140



9 789240 064140