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

Ghassan A. Alothman
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Executive summary

Drawing on the Astana Framework for Primary Health Care (PHC) (1), this case study examines PHC in Kuwait in the context of the COVID-19 pandemic between January 2020 and October 2022. Primary care systems in Kuwait were engaged from the onset of the pandemic, supported by public health functions and multisectoral approaches.

A Central COVID-19 Team (CCT) was established with members representing all divisions of the Ministry of Health (MoH). The CCT built evidence-informed strategies, facilitated intersectoral communications and monitored outcomes through feedback from health care providers. This approach enabled continuity of existing essential services and reduced community transmission using both pharmaceutical and nonpharmaceutical measures. Treatment was made available to all Kuwaiti and non-Kuwaiti residents with COVID-19 infection.

The MoH utilized existing health care infrastructure to contain outbreaks of the virus. Given the widespread geographic distribution of PHC Centres (PHCCs), these facilities were focused on disease prevention, while COVID-19 treatment was made available in hospitals within the six governorates. This also helped with the distribution of workloads for health personnel to align with available human resources.

A key challenge was the lack of digitized information records. Significant efforts and costs were incurred to build this capacity during the early period of the pandemic. The resulting digital platform helped with the pandemic response and it has been integrated since into other interventions within the health care system.

Because of their crowded living conditions, migrant labourers were considered a high-risk population for COVID-19 infection. PHCCs helped identify densely populated regions of the country and implemented movement restrictions among the general population to limit transmission, while community and government entities helped to provide food and medical equipment for affected communities.

Primary care services were involved in quarantine procedures, surveillance and screening, community education and the vaccination campaign. Staff working within the PHCCs contributed to the development of policies and strategies, working with the MoH. The majority of the population were immunized within 10 months of the initiation of the COVID-19 vaccine roll-out. The vaccination campaign was executed in phases according to the availability of vaccine supplies. When stock was limited, high-risk, vulnerable populations and health care workers were prioritized. As more doses were made available, mass vaccination sites were opened and some PHCCs were subsequently utilized as vaccination sites out of routine hours. Multiple vaccination locations, including a large drive-thru vaccination facility, helped with public access to COVID-19 immunizations.
Community engagement and volunteerism were encouraged during the pandemic through new entities that were established to recruit volunteers via online invitations. These entities helped to train volunteers to support the MoH and other government agencies with response efforts. The private sector and nongovernmental organizations (NGOs) also contributed through donations and the provision of human resources.
Introduction and national context

Like many countries, Kuwait faced significant challenges in its response to the COVID-19 pandemic. Despite the government’s effort to contain and control the pandemic, at the time of writing in October 2022, there were 658,520 diagnosed cases of COVID-19 and 2,563 related deaths recorded (2). These numbers are within a population of 4,328,553, distributed across the Kuwait’s six governates over 17,188 km² (3).

This study examines PHC in Kuwait in the context of the COVID-19 pandemic between January 2020 and October 2022. Core components of the Astana PHC Framework (integrated primary care and essential public health functions, multisectoral collaboration and action, and community engagement) (1, 4) were used to analyse data and structure the report findings.

A literature review was conducted to explore the provision of primary care services with reference to the WHO Operational Framework (5). The review focused on the impact of COVID-19 on health care responses, multisectoral policy responses at the governance level, and community mobilization and engagement efforts.

Keywords related to COVID-19, PHC, public health and Kuwait were used to conduct the literature search among articles published in peer-reviewed journals, reports or official government publications. Unpublished documents such as grey literature, preprints and internal reports were also considered if they provided valuable insights and were available in English. All documents were screened based on their titles, abstracts and full texts to assess eligibility.

Key stakeholders from the MoH who were involved in the COVID-19 response were invited to share their in-depth knowledge and experience in PHC including public health aspects of the pandemic response. Consultation questions were formulated to address knowledge gaps on the MoH response, with a focus on the role of PHC. Nine experts, including high-level policy-makers and directors of PHCCs, were involved in stakeholder consultations.

The health care system and environment

The MoH has remained vigilant to the development of the country’s health care system. Considerable expansion of health care infrastructure has made the health system one of the most modernized in the region (6). It is evenly distributed over five main health districts: Al-Asima, Hawally, Farawaniyah, Jahrah and Ahmadi. Each health district has a decentralized and autonomous financial and administrative health care delivery management system (6, 7). The health care system consists of 113 PHCCs distributed across the country, such that there is one PHCC in every residential area within six governorates (7). In addition, there are six general hospitals (secondary care) and nine subspecialty hospitals located in Al-Sabah (tertiary care), providing a total capacity of 15,000 beds and
Introduction and national context

1000 intensive care unit (ICU) beds. The health workforce density is 24 physicians and 59 nurses and midwives per 10,000 population (6).

The health care system relies on both public and private providers. The MoH operates public health care facilities that offer primary, secondary and tertiary care services. Effective communication channels and referral systems strengthen coordination among the three levels of care. Private health care providers complement the public sector and cater to those who prefer or can afford private care.

PHC is crucial in the health care system. PHCCs serve as the first point of contact for the population, providing a wide range of services including medical consultations, vaccinations, maternal and child health services, family planning, chronic disease management, mental health support, dental care, laboratory investigations, and pharmacy and radiology services. A personalized patient experience is achieved through the assignment of a family physician or general practitioner (GP) who serves as the primary focal person throughout service delivery (8). The government invests in infrastructure development to ensure that PHCCs are well-equipped with modern facilities, medical apparatus and technology.

PHCCs adhere to the standards and guidelines set by the World Health Organization (WHO) and the MoH. Quality assurance programmes are implemented to ensure effective and efficient service delivery. These programmes involve regular monitoring and evaluation of clinical practices, patient satisfaction surveys, continuous professional development for health care providers, adherence to infection control protocols, and the use of evidence-based guidelines for diagnosis and treatment.

Regulatory mechanisms have been established by the MoH to ensure quality and safety in health care. The MoH sets standards and guidelines, conducts inspections, and licenses health care providers. The Kuwait Institute for Medical Specializations (KIMS) oversees professional development and licensing of health care professionals. During the pandemic, regulations were put in place to maintain high standards of care and to address the surge in demand for health care services. Licensed professionals were adequately trained, while volunteers met certain criteria to safeguard public health and effectively respond to the challenges posed by COVID-19.

The country has achieved a high level of access to PHC services. PHCCs are located strategically across urban and rural areas to ensure easy access to services regardless of geographical location. While utilization rates are higher in urban areas due to a higher population concentration, the standards of care, accessibility and available facilities remain the same for both urban and rural services.
PHCCs provide comprehensive service packages in accordance with international standards and guidelines. Efforts are made to continuously develop the physical and human capacity within PHCCs to meet the growing demands for PHC services. Despite the wide availability of PHCCs, however, a significant number of citizens and residents opt for private health care due to cultural perceptions and concerns about service levels in the public system.

Key stakeholders, including local government authorities, health care providers, community members, civil society organizations and nonstate actors have been supportive of PHC. Further, national strategies and budget allocations prioritize and support PHC. The MoH oversees health care services and implements initiatives to strengthen PHC by establishing new PHCCs, recruiting and training health care professionals, procuring medical equipment and supplies, and implementing health promotion programmes. Civil society organizations and nonstate actors collaborate with authorities and health care providers to advocate for improved access to quality PHC services and to work on initiatives related to health education, disease prevention and community outreach programmes.

Laws and regulations prioritize the role of PHC. The Public Health Law provides a legal framework for the organization and regulation of public health services, emphasizing preventive care, health promotion and comprehensive PHC services. This Law derives its essence from Article 15 of the Kuwaiti Constitution, which considers the well-being and public health care of its citizens as a core responsibility (9). National strategies and plans, such as the National Health Plan 2016–2020 (10), aim to enhance the quality and accessibility of health care services, with a specific focus on strengthening PHC.

Challenges faced by the health care system prior to the pandemic include an increasing burden of noncommunicable diseases (NCDs), an ageing population, a shortage of health care professionals and inconsistent oversight across public and private sectors. The pandemic exacerbated these challenges, leading to increased demand for health care services and resource constraints. Efforts were made to address these obstacles during the pandemic, including through the development of information systems capacity, improved disease surveillance and training programmes. However, challenges remain in terms of the interoperability of IT systems, standardized protocols for data exchange, and limited resources for IT implementation and maintenance. Funding for IT infrastructure upgrades, development of standardized protocols and training programmes for health care personnel could help to address these constraints at the local level.
How primary care and essential public health functions are responding to COVID-19

Kuwait’s PHC and public health systems were crucial in containing the pandemic (11). This level of the health system was responsible for implementing quarantine and isolation procedures, surveillance and contact tracing, public education and the vaccination campaign, while also maintaining essential medical services.

The MoH prioritized the maintenance of essential medical services across all levels of care. To ensure this, Jaber Alahmad Alsabah Hospital was designated as the official COVID-19 facility with a capacity of 1130 beds and a large number of ICU beds (12, 13). This allowed other PHC facilities and hospitals to function without being overwhelmed by COVID-19 cases. To address a shortage of nursing staff, school nurses were trained to treat COVID-19 patients and they later joined Jaber Alahmad Hospital. The MoH provided full support to all PHCCs to maintain essential medical services, especially for NCDs.

A decrease in childhood vaccination rates was observed during the periods when movement restrictions were in place due to parental fear of visiting PHCCs, yet at an overall level essential services were not significantly affected during the pandemic (14). Walk-in clinics were replaced by telemedicine clinics, and patients were instructed to visit the PHCC after a virtual assessment by a physician. Triage units were established in each facility to handle suspected COVID-19 cases, while PHCCs and hospitals were separated into green and red zones to reduce the risk of exposure for vulnerable populations. Surveillance and quarantine procedures were planned and executed by the Public Health and PHC departments, with support from the Preventive Medicine department.

The first confirmed cases of COVID-19 were reported on 24 February 2020, among passengers arriving from Iran (12, 15). The government faced challenges in repatriating citizens and in controlling community transmission among migrant workers (16). Early interventions – such as school and airport closures, curfews and restrictions on public gatherings – helped delay the first wave of the pandemic (16).

The health system infrastructure allowed for efficient referrals during the pandemic. PHCCs were responsible for essential medical services and managing suspected COVID-19 patients at designated clinics, and referral policies were constantly updated based on feedback from PHCCs to the MoH. The PHCCs collaborated with other health care providers and organizations to establish telemedicine and mobile clinics for vulnerable populations. They also worked with community leaders, NGOs and volunteers to provide essential supplies and support services to those in need.

PHC establishments have relationships with the community through Community Cooperative Committees (CCCs), which serve as a platform for dialogue between health care providers and community representatives. Additionally, regular health
promotion campaigns and educational sessions are organized by PHCCs to raise awareness and encourage community participation, while collaboration with local organizations and the use of social media platforms help PHCCs to reach a wider audience (13, 17). The establishment of open and consistent channels of communication with the public during the pandemic helped gain community trust and encourage compliance with public health measures. Intersectoral and multisectoral collaborations involving experts and department heads ensured the dissemination of evidence-based information, while daily press conferences and various media platforms were utilized to update and educate the public (18). Additionally, the MoH launched a dedicated website to share COVID-19 information (19).

The vaccination campaign

The COVID-19 vaccination programme began in January 2021 with the aim of vaccinating over 70% of the population to achieve community-based immunity. The MoH conducted the largest vaccination campaign in the country’s medical history, successfully immunizing many individuals within a short period of time (20). As more vaccine doses became available, additional vaccination sites were gradually opened, resulting in 87% of the population receiving two vaccine doses by 28 October 2021 (21). Despite initial hesitancy towards vaccination, the MoH’s planning, management and recruitment of human resources played a crucial role in vaccinating so many individuals (22). The success of the vaccination campaign can be attributed to strong collaboration between multiple sectors, effective utilization of resources within the MoH infrastructure and the mobilization of community volunteer resources. Planning and execution of the campaign was led primarily by the PHC, Public Health and Preventive Medicine departments. These departments implemented innovative methods such as homecare and commercial mobile units, mass vaccination sites and designated PHCC vaccination sites.

The vaccination campaign was carried out in several phases, depending on the availability of vaccines. The first phase focused on vaccinating high-risk populations, including individuals aged 65 years and above with or without chronic diseases, as well as health care workers. PHCCs played a crucial role in this phase due to their accessibility to high-risk individuals. Prior to the pandemic, all PHCCs provided homecare services to elderly and bedridden patients and those living with disability within their designated residential areas. The MoH leveraged this advantage by deploying mobile units staffed with physicians and nurses from each PHCC to promptly vaccinate those at high risk against COVID-19.

As more vaccine doses became available, the prioritization matrix was adjusted to include wider age groups and to increase population coverage. In December 2020, the MoH opened a mass vaccination site at the International Fairgrounds in Mishref (23). This dedicated facility, primarily managed by the PHC and Public Health departments in collaboration with various governmental and private sectors and community volunteers, operated with strict emergency and safety measures in place.
Migrant workers living in suboptimal and compact housing were identified as a high-risk population (12). This was especially true for those migrants employed in the private food industry and other commercial entities that required interaction with the general population. Due to their large numbers and difficulty in accessing mass vaccination sites, the MoH deployed 10 mobile units staffed by PHCC personnel to vaccinate these workers. Each mobile unit covered several large corporations within a specific geographical location. Within 23 days, the workforce of major food corporations and food delivery companies had been vaccinated, followed by migrant labour communities in highly dense residential areas. While PHC units were engaged in COVID-19 vaccination efforts, the Preventive Medicine team continued to deliver routine immunizations for children at all PHCCs.

To increase the potential of achieving community-based immunization against COVID-19, additional vaccination sites were opened across various geographic locations. Out of the 113 PHCCs, 46 were designated as COVID-19 vaccination centres, while the other facilities continued to provide essential services. Each PHCC vaccination site served a specific geographical region and these were distributed evenly across the five health regions. These facilities administered COVID-19 vaccines outside of normal clinic hours, while also ensuring the continuation of essential services and routine immunizations in the mornings.

As the summer approached and temperatures rose in 2021, a drive-thru vaccination site was established on the Sheikh Jaber Al-Ahmad Al-Sabah Causeway to maintain vaccine coverage within the community. The site was built collaboratively between the MoH, the Kuwait Oil Company (KOC) and Kuwait Integrated Petroleum Industries (KIPIC), and it featured clinics and emergency beds. The site was managed by 200 medical staff, primarily from PHCCs, and it had the capacity to vaccinate 20 000 individuals per day (24). It provided a convenient option for citizens and residents to receive their vaccination from the comfort of air-conditioned cars.

How multisectoral policy and action are supporting COVID-19 responses

From the onset of the COVID-19 outbreak, the Prime Minister and the Cabinet of Ministers provided effective leadership. The pandemic response was led primarily by the Minister of Health, with all ministries in the public sector enforcing measures to contain the virus and limit its impact. This collective action stemmed from the Kuwaiti Constitution, which considers caring for the health and well-being of the public as one of its top responsibilities alongside efforts to guarantee solidarity in society during catastrophes and public crises (9, 25). Of note, laws and regulations were passed ensuring that all COVID-19-related care was provided for free, regardless of citizenship status. The multisectoral approach helped mobilize resources nationally within the public and private sectors, and for these resources to be channelled towards specific strategic goals to contain the pandemic.
The Minister of Health established and headed up the Central COVID-19 Team (CCT), which played a crucial role in facilitating and governing multisectoral collaboration during the pandemic. The governance structure of the CCT was designed to ensure effective coordination and decision-making, as well as the sustainability of the response efforts. It included representatives from various government departments (e.g., the Ministry of Interior (MoI), Ministry of Education and Ministry of Commerce (MoC)), local health authorities, nongovernment actors such as those from the private sector, plus experts from the Public Health, PHC and Preventive Medicine departments.

The objective of the CCT was to inform and construct evidence-based policies and to ensure the engagement of all stakeholders at multisectoral and intersectoral levels. Additionally, the CCT was responsible for consistent monitoring of the global pandemic status and to make necessary adjustments to the plans and responses at the three levels of health care. The CCT also ensured a unified response by coordinating action and resource allocation across stakeholders at different levels. The unique infrastructure of Kuwait’s health care system was utilized and the CCT identified all barriers and resources. The overall approach was based on four main criteria: evidence, observations, best practices and a cost/benefit analysis. To formulate evidence-informed policies, the CCT followed institutional guidelines issued by WHO, the European Centres for Disease Control, the United States Centers for Disease Control and other countries. Furthermore, policies were implemented through subcentral governance. Direct communication was established between the CCT and Public Health and Preventive Medicine satellite committees within all hospitals and PHCCs, to ensure the implementation of all policies, goals and assigned roles on the one hand and to provide consistent feedback on the other. This enabled dynamic restructuring of policies and strategies as changes were taking place worldwide and within the country.

Figure. 1 shows the public sector entities that worked closely and consistently with the MoH in the pandemic response. This collaboration was integral to the governance efforts of the MoH, mobilized by the CCT and working to support all three levels of health care (primary, secondary and tertiary care).

The MoI enforced all measures and laws that were introduced to ensure social distancing among the population. It regulated the social behaviour of individuals by banning gatherings within or outside any public or private institutions and in public spaces, by introducing a partial curfew, and by instituting penalties to ensure public compliance (25, 26). The MoI was also responsible for controlling safety and security at all vaccination facilities, where they received support and assistance by the National Guard. The MoC enforced business closures for shops and central markets while the private sector made online shopping available to the public.
The Kuwait Ports Authority (KPA) collaborated with the MoH to implement screening measures at ports that received large ships. The staff on board observed social distancing and were well supplied with personal protective equipment (PPE). When ships came to port, medical personnel were deployed to take the temperature of everyone on board.

The vaccination campaign was successful due to this widespread multisectoral collaboration. The National Guard assisted KOC and KIPIC to prepare the Kuwait International Fairgrounds in Mishref to be used as a surveillance site initially and later as a mass vaccination site (23). They also assisted with preparations for the drive-thru mass vaccination site at Sheikh Jaber Al-Ahmad Al-Sabah Causeway (24).

Kuwait University (KU) was also engaged during the vaccination campaign and their occupational and safety team managed to vaccinate all KU staff in an exceptionally short time. Leveraging this training, the team have also been delivering flu vaccines on campus.

Considerable contributions were made too from the private sector during the pandemic. The Kuwait Foundation for the Advancement of Science (KFAS), a private nonprofit organization, imported more than 170 ventilators and personal protective devices from China as part of the Foundation’s efforts in the Emergency Response Program for COVID-19 (27). The Al Kout Beach Hotel and Al Khiran resort were repurposed as quarantine centres.

A national fund (coronafund.cmgs.gov.kw) was set up by the government to support the COVID-19 response, with contributions reaching more than 50 million Kuwaiti dinar (KD) (over US$ 165 million). Charities, banks and the Kuwait Chamber of Commerce and Industry (KCCI) are among those that donated. Meanwhile, mobile operators offered free 5G Internet access for subscribers during the COVID-19 crisis. Many other organizations and businesses took the initiative to provide different services during the pandemic, including putting their hospitals, aircraft and other facilities at the disposal of the government in case of need (12).

Finally, at the PHC level there was strong collaboration between PHCCs and nearby Cooperative Organizations. All of these organizations operate under the auspices of the Ministry of Social Affairs (MoSA). They provided necessary medical supplies and PPE required by PHCC staff and distributed them at key outlets for free to all workers and residents. They also provided food and shelter for PHCC medical and nonmedical staff during the periods when movement restrictions were in place to enable health personnel to stay near the PHCCs.
Pre-existing systems and mechanisms that facilitated the emergency response to the pandemic

The multisectoral collaboration seen during the pandemic was built upon pre-existing systems and agreements that facilitated communication and coordination among key stakeholders. The Kuwait National Emergency Plan (28), designed jointly by the Kuwait Council of Ministers and the General Administration of Civil Defense, served as the foundation for this collaboration.

A well-developed health care system

Kuwait’s health care system, which includes both public and private service providers, played a crucial role in the pandemic response with the existing infrastructure allowing for seamless collaboration between the government and nongovernment actors (25). PHC services had significant involvement in the development of national plans and strategies for emergency preparedness and response during the COVID-19 pandemic. As described previously, multiple
How multisectoral policy and action are responding to COVID-19

stakeholders, including government agencies, health care providers, public health experts and community representatives, engaged in a collaborative effort led by the MoH and the CCT.

Other stakeholders in the health care system also played critical roles – this includes health care professionals, public and private hospitals and clinics, pharmaceutical companies, insurance providers, civil society/patient advocacy groups and non-state actors such as the KCCI. Kuwait’s national plans and strategies for emergency preparedness and response actively engaged PHC services, ensuring a holistic approach to addressing the health needs of communities. Clear roles, responsibilities, lines of accountability and a chain of command were established to guide PHC services and other stakeholders in their contributions to the pandemic response. PHC providers collaborated with other sectors such as that of education and social services to support vulnerable populations and to disseminate accurate information.

Kuwait implemented measures to mobilize surge capacity and collaborated with the private sector and nongovernment actors on this. For example, the MoH leveraged public-private partnerships to enhance health care infrastructure and expand testing capabilities. Collaboration with private hospitals and laboratories increased testing capacity and ensured timely diagnosis of COVID-19 cases. Local pharmaceutical companies played a crucial role in supporting the distribution of essential supplies and implementing preventive measures.

**Pre-allocated contingency funds**

Kuwait has pre-allocated contingency funds for immediate use during emergencies. The Sovereign Wealth Fund (SWF), managed by the Kuwait Investment Authority (KIA), serves as a reserve of financial assets that can be utilized in times of crisis. Additionally, the government has the authority to adjust budget allocations and redirect funds towards urgent needs in times of crisis.

**Bidirectional communication channels**

There are well-established bidirectional communication channels and feedback loops between the government and the community, which were put to use during the pandemic. Through this system, various channels (official websites, social media platforms, hotlines and public announcements) are utilized to disseminate information and guidance to the community. The government also collects feedback from the community through surveys, public forums and helplines to understand their needs and concerns. The legally enforced freedom of speech allows the community to express their opinions, suggestions and feedback about governmental policies and activities without restrictions.
**Sociopolitical factors**

In response to the emergence of COVID-19, the Prince of Kuwait at the time delivered a televised speech on 22 March 2020 (29). The speech aimed to rally the nation and instructed the government and all stakeholders to implement active and transparent measures to ensure the safety of the country. This address fostered a sense of unity, and it increased morale and trust in the government’s handling of the pandemic. The government’s utilization of previously built channels of transparency and accountability played a role in the widespread response, particularly in combatting corruption and improving public sector efficiency. Kuwait’s relatively high social cohesion, attributed to shared cultural values and close-knit family structures, likely contributed to community support networks during the pandemic.

**How communities are responding to COVID-19**

Communities played a supportive role in the pandemic. At the time there were over 1600 volunteer entities in the country, with most joining either the General Department of Civil Defense (GDCD) or the Kuwaiti Red Crescent (KRC). These volunteers were involved in various activities to support initiatives in the country. The GDCD, a governmental entity under the MoI, had a large base of trained volunteers to deal with emergencies and crisis situations (30). They collaborated with the KRC and other volunteer organizations (31).

More than 25,000 citizens and residents volunteered with the GDCD and were trained and dispatched to regions in need (12, 13). Volunteers were distributed across sectors such as hospitals, quarantine facilities, surveillance quarters, Cooperative Organizations, and vaccination sites. In Cooperative Organizations, these volunteers served customers, sterilized goods, and delivered food when movement restrictions were in place. They also prepared and delivered charity food baskets to families and workers in need (31). At vaccination sites, volunteers played a vital role in data recording, organizing visitor flow, and providing instructions to vaccine recipients. Multinational volunteers with foreign language skills helped overcome language barriers between recipients and staff. The KRC volunteers facilitated access for individuals with additional needs.

The WHO Healthy City Project (HCP) was widely utilized during the pandemic (32). At the time of writing, there were five accredited Healthy Cities (HCS) and 15 registered ones in the country. The HCP framework operates similarly to the Astana framework (1), emphasizing community engagement and mobilization for health development. HC Executive Committees, composed of volunteers, are responsible for implementing the initiative’s indicators and for mobilizing the community. One domain of the HCP is emergency and crisis preparedness;
therefore, this had been planned pre-pandemic. HC teams supported PHCCs by distributing medication to patients’ homes and by providing accommodation to medical and nonmedical staff. They also helped distribute educational materials and public information.

In Yarmouk Healthy City (YHC), community engagement played a significant role in managing the crisis alongside Yarmouk PHCC (YPHCC) staff. The Executive Committee activated a preset emergency plan and involved stakeholders such as the police, Cooperative Organization, educational committee, volunteer groups and private sector business owners. They organized triage areas, implemented electronic appointment systems and established a field hospital with 53 beds for mild-to-moderate COVID-19 cases. Yarmouk youth volunteers were innovative in their contribution to the pandemic response. They produced recyclable PPE and utilized 3D printing technology for face shields and hygienic door handles.

Community members also provided support to those in need. For example, many private landlords reduced or suspended rent payments as an act of charity. Additionally, individuals donated food, beverages and money to help those affected financially by the business closures and stay-at-home orders.

**Conclusion and lessons learned**

Case study findings indicate that Kuwait responded proactively to the COVID-19 crisis by utilizing all departments of the MoH effectively. Hospital-based and PHC services were mobilized and evidence-informed policies were generated to contain the outbreak. The strategies were flexible and adaptable, utilizing available resources. The pandemic response resulted in improvements to routine PHC and public health services that will likely strengthen the preparedness of the health care system and services for future challenges.

Through centralized governance, there was an ability to ensure a unified and consistent approach to the pandemic. This allowed for clear and coordinated decision-making, policy formulation and resource allocation. Centralization also facilitated effective communication and coordination between different stakeholders involved in managing the pandemic, such as government agencies, health care providers and public health authorities. At the same time, decentralized executive mechanisms allowed for flexibility and adaptability in implementing those policies on the ground. This meant that different functions of the health care system – such as hospitals, clinics, testing centres and contact tracing teams – had the autonomy to carry out their specific tasks based on local conditions and needs. It also ensured that resources and efforts were utilized efficiently across different regions or areas within the country. There is an opportunity for the MoH to build on this success by adopting similar approaches to manage other health conditions and priority issues, using central governance teams to resolve challenges including service fragmentation and gaps in multisectoral collaboration.
During the pandemic, the MoH quickly adopted digital technology and electronic records, despite not utilizing them before. Despite initial challenges in this area, substantial efforts and costs were dedicated to digitalizing health data, and to improving communication and feedback. The MoH has capitalized on this progress by transitioning to full digitalization of services and reducing manual processes. As such, there have been significant advancements in strengthening information systems capacity, particularly in disease surveillance. User-friendly interfaces and training programmes have facilitated compliance in data collection and reporting by personnel, ensuring timely and quality information for policy-makers. Interoperability of IT systems across different levels of care is being pursued, but challenges remain at the local level, including variations in IT infrastructure, lack of standardized protocols for data exchange, and limited resources for implementation and maintenance. To overcome these challenges, investments may be needed at the local level for infrastructure upgrades, standardized protocols, and ongoing training programmes for health care personnel.

The community’s valuable contribution during the pandemic was evident through effective volunteering. In the case of the HCP, pre-established community partnerships enhanced crisis preparedness. The community’s resourcefulness, driven by strong health literacy, supported response efforts. HCs are gaining popularity in Kuwait, and utilizing their framework can empower communities effectively - they bring communities closer to health care providers and bridge gaps in community-based resources to meet PHCC needs. Community partnerships led by local leaders result in responsive, responsible and resilient communities that are capable of fulfilling predetermined roles. Public compliance with health interventions relies on health literacy and capacity building, which are both foundational aspects of the HCP. Added to this, transparent, unified and effective communication by the MoH secured public compliance and trust. This strategy of health information delivery is crucial for informing and educating the public and for encouraging behaviour change. Health promotion strategies should also foster community partnerships, as seen in the case of HCs.

Kuwait’s experience during the COVID-19 pandemic between January 2020 and October 2022 highlights the importance of pre-existing mechanisms and agreements to engage with nonstate actors. These frameworks enabled the government to mobilize resources and expertise quickly during the pandemic. Sustaining initiatives with non-state actors is likely to require long-term planning, dedicated funding and continuous dialogue to ensure collaboration beyond the immediate crisis response.

Infection prevention and control interventions including physical distancing, self-quarantine, hand washing and the wearing of masks when infected were implemented successfully. There is an opportunity to integrate these learnings into everyday community and service practice through public education.
Finally, the pandemic has highlighted the importance of addressing social disparities and improving health literacy. Migrant workers, constituting two-thirds of the population, faced double the risk of morbidity and mortality from COVID-19 infection due to crowded living conditions and low socioeconomic status (10, 16, 33). Improving health literacy and living conditions of vulnerable groups is therefore crucial for future pandemic preparedness.
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This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization. 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.