

Mitigating the Impact of COVID-19 and Strengthening Health Systems in the Middle East and North Africa



KEY MESSAGES

- MNA region faces a high risk of morbidity and mortality due to COVID-19, attributable to a high and growing burden of non-communicable diseases (NCDs) and a diverse range of vulnerable and at-risk populations due to poverty, inequality and humanitarian crises.
- COVID-19 is expected to cause a significant shock on MNA health systems, not only directly but also through indirect effects on care-seeking for other essential health services. This will exacerbate the systems' pre-existing weaknesses across low and inequitable levels of financing, fragmented and inflexible service delivery, limited and inefficiently distributed human resources and physical resources, and weak surveillance and health information systems.
- While the governments and their partners, including the World Bank, have taken decisive steps in responding to the emergency, there remains a need for continued support in strengthening the health system to ensure continuity of services, particularly in terms of accelerating reforms to improve the level and distribution of health financing, physical and human resources; improving the flexibility and quality of services at community, primary and hospital levels; proactively involving the private sector; and improving surveillance capacity and integrated health information systems.

1. CONTEXT

Almost every country in the Middle East and North Africa (MNA) region is faced with the increasing significant burden imposed by COVID-19 on their health systems. As of July 20, there are almost 1.2 million confirmed cases in the MNA region and almost 30,000 deaths. The largest numbers of cases are in Iran, Saudi Arabia, Qatar, Iraq and Egypt. As many countries have started easing lockdown restrictions, it is possible for countries to face significant increases: countries like West Bank and Gaza and Iraq have already been experiencing surges over June-July. Due to low testing in many of the countries, it is likely that the case count and mortality are both significantly higher than reported.

The focus thus far has been on executing emergency interventions to prevent, detect and respond to the COVID-19 epidemic. Most immediately, there is a need to invest in a rapid scale up of testing and surge case management capacity, emergency management, as well as epidemiological surveillance through contact tracing and infection

prevention and control. In order to cope with the emergency posed by the crisis, World Bank has been preparing projects in the region focusing on emergency COVID-19 response, which includes strengthening country-level coordination, planning and monitoring; risk communication and community engagement; surveillance, rapid response teams and case investigation; points of entry; national laboratories; infection prevention and control; case management; and operational support and logistics.

COVID-19 models for MNA countries indicate that the epidemic is far from its peak, indicating the emergency will remain for the foreseeable future and result in a reduction in demand for essential non-COVID-19 health services. While the emergency focus on preventing, detecting and responding to the threat caused by COVID-19 is essential, health systems will need to continue operating to respond to the increased demand from COVID-19 as well as from the usual demand. Reproductive, maternal and newborn

health services, immunizations, chronic care management and other inpatient and outpatient services will continue, and demand for certain services may even increase due to complications resulting from delayed care-seeking. Further, if social distancing measures continue, and if vulnerable populations are taken into quarantine or are shielded, there will be a significant need to ensure continued support and access to health services for these individuals. COVID-19 is expected to cause declines in routine service utilization, given reduced mobility and reduced desire to go to health facilities for routine services. Evidence from past pandemics points to reductions in care as well as increased mortality due to reduced and delayed care-seeking for non-pandemic related conditions; a recent modeling exercise predicts a 15% decrease in coverage of key maternal and child health services, potentially leading to a 10-45% increase in under-5 mortality and

a 8-39% increase in maternal mortality per month across low- and middle income countries.¹ As such, given the anticipated future waves of COVID-19, there remains a need to strengthen disease surveillance and pandemic preparedness, as well as continue investments in population-wide testing and contact tracing for COVID-19. Many countries have instituted shutdown measures, but these measures are difficult to sustain beyond the short run, particularly considering the limited fiscal space of governments to respond to the crisis and the high share of informal sector employment in the region, thus necessitating an adaptive response to the situation. Table 1 presents a preliminary overview of non-COVID-19 related health service measures taken in the region, indicating that many countries have not yet instituted comprehensive measures to ensure service continuity for non-COVID-19 services, and some have suspended non-essential health services.

Table 1: Indicative overview of health system measures taken by MNA countries²

Health system measure	Countries
Rapid hiring, training, incentivization and certification of health workers	Israel, Libya, Syria
Expansion of health infrastructure	Kuwait, Djibouti, Morocco
Strengthening health worker infection prevention for community health workers	Djibouti
Improved financial protection for COVID-19 and non-COVID-19 services	Israel
Recommendations on ensuring routine service delivery (e.g. immunization)	Morocco
Suspension of non-essential health services	Jordan, Kuwait
Launch of communication services for non-COVID-19 services	Israel, Morocco

¹ Robertson, T., Carter, E.D., Chou, V.B., Stegmuller, A., Jackson, B.D., Tam, Y., Sawadogo-Lewis, T., Walker, N., 2020. Early Estimates of the Indirect Effects of the Coronavirus Pandemic on Maternal and Child Mortality in Low- and Middle-Income Countries. SSRN Journal. <https://doi.org/10.2139/ssrn.3576549>

² WHO/LSHTM, extracted on May 1, 2020 and may be incomplete and outdated. This list excludes standard COVID-19 health system precautions such as improving case detection and treatment, testing and infrastructure, which has been executed in all countries with cases.

MNA countries have a wide range of at-risk populations, which necessitate a longer-term, health system-wide approach to managing the COVID-19 pandemic in addition to the emergency projects prepared. According to UNHCR, over 25% of the world's population 'of concern' is in the MNA region, given the high levels of displacement particularly in urban, dense settings, which has significant implications for the health system response.³ Displaced populations pose one of the most significant vulnerable groups, particularly in terms of service delivery. In addition to refugees, socioeconomic and gender inequalities imply that the burden of COVID-19 will be felt differently across groups, with the burden falling predominantly on disadvantaged groups or those working in the informal sector, who will have a limited capacity to cope with the health and economic impact of the crisis. Another at-risk population is the elderly: those over 60 years of age are at a higher mortality risk from COVID-19, and this group constitutes about 15% of all MNA countries.⁴ Across these at-risk groups, risks are elevated further by the burden of non-communicable diseases (NCDs): over 70% of the disease burden in the MNA region is from non-communicable diseases such as diabetes and hypertension, which significantly exacerbates the severity of COVID-19, particularly considering the majority with these conditions who do not receive any treatment. Risk factors associated with non-communicable diseases, such as malnutrition and obesity, also pose significant challenges in the region, with a high prevalence of obesity. In particular, in conflict settings such as Yemen, COVID-19 will also pose a significant burden, given the double burden of communicable and non-communicable diseases and a constrained health system combined with food insecurity.

COVID-19 is likely to exacerbate the preexisting weaknesses of health systems, and

this note describes the impact of COVID-19 on the health systems of countries in the MNA region as well as ways to mitigate this impact. A strong health system which is able to protect its health workers and capacity while continuing to deliver COVID-19 and non-COVID-19 services will enable reduced impact of the pandemic in terms of morbidity and mortality across all conditions. It will also facilitate a transition towards opening up and mitigating the economic impact of the disease. Specifically, this note first presents an overview of the MNA health system context across key health system functions of financing, service delivery, physical resources, human resources, supply chains, medical equipment, and governance. Then, it presents options to mitigate this impact, across relief, response and recovery phases. The proposed interventions could be undertaken by governments as well as the World Bank in ensuring governments can continue to prevent, detect and respond to the COVID-19 pandemic within a strengthened health system. Given the diverse context of countries in the MNA region, this note focuses primarily on issues applicable to low- and middle-income countries, including those with a significant share of vulnerable populations. This longer-term response will need to focus on protecting human capital formation, harness the potential of innovation, and focus on mitigation for the vulnerable and the elderly. Keeping in mind the differences in contexts and limited data on the exact impact of COVID-19 on the health system, such as through in-time data on service utilization or excess mortality, this note presents a starting point for discussions across the region for priority health system strengthening areas.

³ McNatt, Z.Z., 2020. *Addressing noncommunicable diseases among urban refugees in the Middle East and North Africa - a scoping review.* *Confl Health* 14, 9. <https://doi.org/10.1186/s13031-020-0255-4>

⁴ UN World Population Prospects, 2020

2. IMPACT OF COVID-19 ON HEALTH SYSTEM FUNCTIONS IN MNA

Financing

Many MNA countries suffer from limited public health financing and stagnant fiscal space, a situation expected to worsen with COVID-19. Governments are expected to face further constraints to raising revenues for the health sector, considering the economic shock COVID-19 is set to impose on these countries. Yet, demands on the health sector are expected to increase, particularly with respect to costs associated with COVID-19. Significant expenditure will be required to ensure that the health system has sufficient physical and human resources to cope with the additional demand from COVID-19, considering the low capacity of many health systems in the region. Certain countries, such as Egypt, are delivering COVID-19 services without any user fees; in order to ensure a high quality of service delivery, these efforts will have to be complemented by improved government spending to ensure equitable access.

Figures 1 and 2 demonstrate the issue of low public fiscal space in MNA countries, both in terms of the low levels of public expenditures on health, as well as the ability to grow overall health spending. Figure 1 demonstrates that Iran,

Malta, Tunisia, Lebanon, Jordan and Israel spend over 10% of their government budget on health, but other MNA countries spend significantly less. Notably, Egypt, Iraq, Djibouti and Yemen spend 5% or less of their government budget on health, which demonstrates significant fiscal constraints. The figure (right panel) also demonstrates that at an aggregate level, MNA countries spend a significant amount of their GDP on health. Except for Iraq and Djibouti, all LMIC MNA countries spend over 5% of their GDP on health; this indicates the limited room for growth at an aggregate level as well as the overreliance on private sector spending, which drives up health expenditures further, demonstrating the need to explore efficiencies. Figure 3 demonstrates this in per capita figures, where Iraq, Yemen, Djibouti and Morocco have low levels of per capita expenditure on health and even lower shares of public spending on health, whereas Lebanon, Iran, Jordan, Algeria and Tunisia have relatively high levels of health spending. These low and fragmented levels of health financing posit a risk for ensuring an effective and equitable response to both COVID-19 and existing health system demands.

Figure 1: Current Health Expenditure as % of GDP (left), and Domestic General Government Health Expenditure as % General Government Expenditure (GGE) in MNA countries (right)⁵

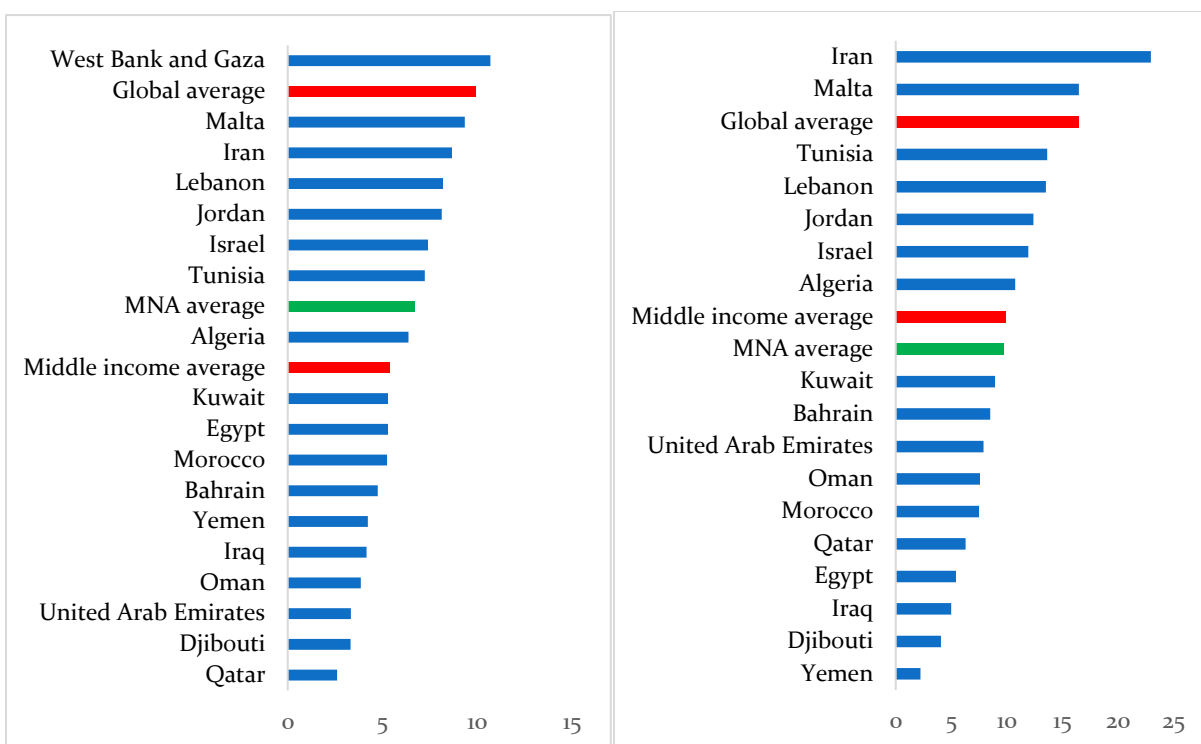
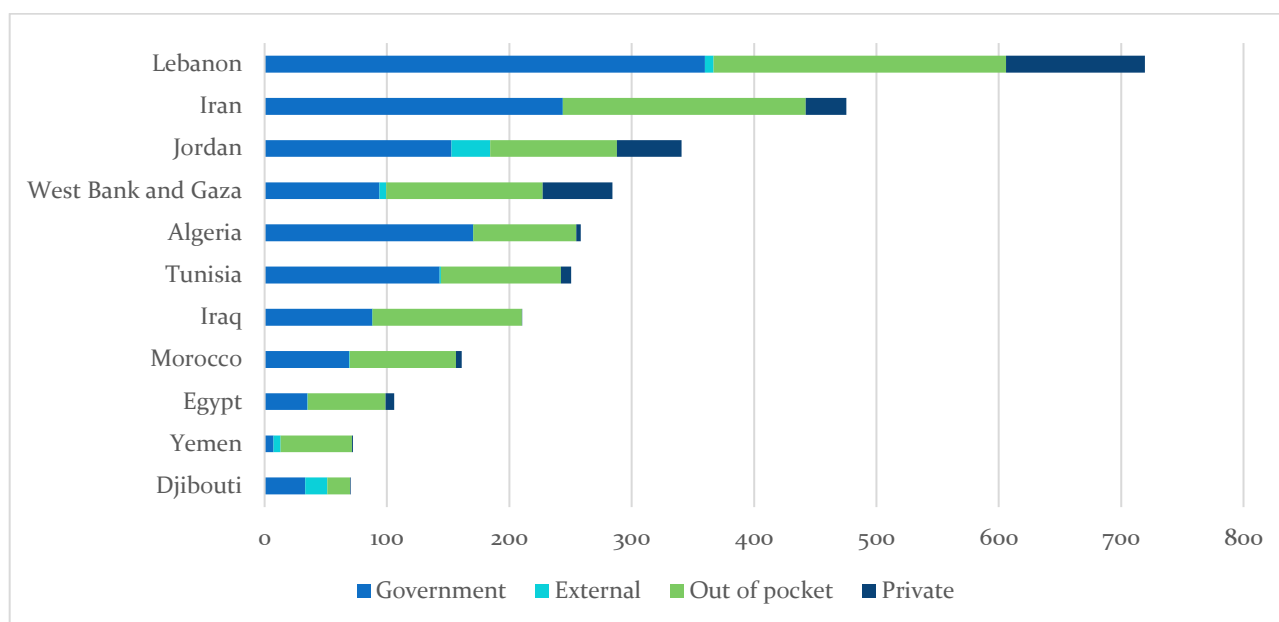


Figure 2: Per capita current health spending by financing source in LMIC MNA countries (in current US\$)⁶



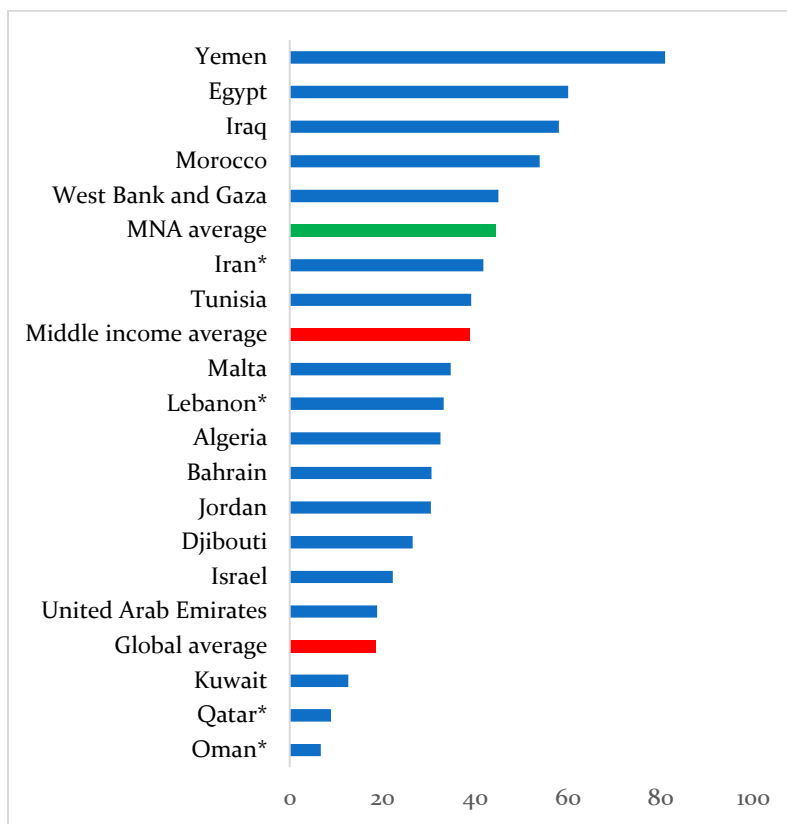
⁵ Figures 1 through 3 are calculated with data from the WHO Global Health Expenditure Database, all data from 2017 except for Yemen data from 2015. No data available for Libya or Syria. MNA average excludes high-income countries.

⁶ Data for all countries except for Yemen and West Bank and Gaza is from 2017 WHO Global Health Observatory. Yemen data from 2015, West Bank and Gaza data from 2016.

In addition to limited revenue raising capacity, MNA countries suffer from high out-of-pocket spending due to a lack of prepaid risk pools. Most countries in the region do not have universal public health insurance, and provision of insurance remains dependent on employers. Evidence also points to low levels of insurance coverage even if households have insurance, with

many individuals having to pay for drugs and hospital visits out of pocket. Figure 3 demonstrates that in Egypt, Iraq, Morocco and Yemen, over 50% of health spending was directly financed by households at the point of care, which is inefficient and inequitable. This posits a significant risk, particularly as the costs of case management for COVID-19 are expected to be high.

Figure 3: Out of pocket spending as a share of total health spending in MNA countries⁷



Passive purchasing and an overreliance on private sector for service delivery without cost-containment measures posit sustainability challenges, particularly in the face of COVID-19.

A recent review of private health sector financing in MNA region⁸ finds very limited use of strategic, data-driven purchasing decisions in the region, resulting in inefficiencies and inequities. Other than various

capitation and performance-based payment methods in Egypt, Jordan and Lebanon, no strategic purchasing methods have been implemented in the MNA region. Similarly, there is a lack of gatekeeping mechanisms for bypassing, and reform initiatives require substantive financial and institutional arrangements. This presents a risk for ensuring efficient and equitable delivery of services at a time

⁷ Legend: *: countries which have seen a decline in the share of out-of-pocket spending since 2010; for all other countries, this amount has remained the same or increased since 2010. MNA average excludes high-income MNA countries.

⁸ Sustaining Health Outcomes through the Private Sector Project and Health Finance and Governance Project. 2018. Trends in Health Financing and the Private Health Sector in the Middle East and North Africa. Rockville, MD: Abt Associates Inc.

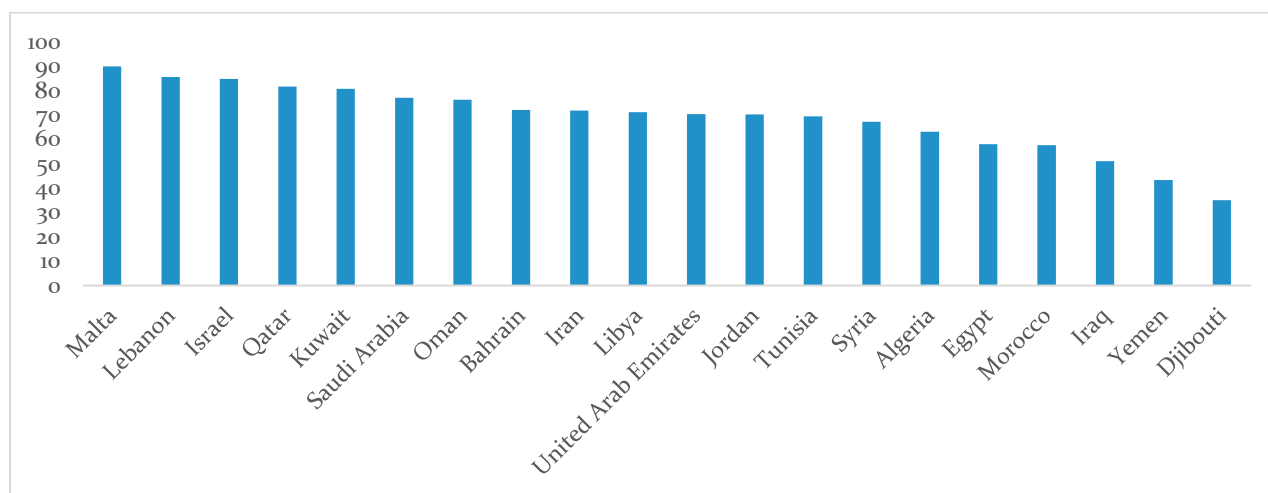
when the system will be overburdened due to the COVID-19 epidemic. Another COVID-19 related sustainability challenge is that most provider payment mechanisms are fee-for-service, and health facilities are expected to lose a significant amount of income from reductions in demand. This is a particular risk for private facilities: as they do not receive any subsidies from the government, and as COVID-19 is managed exclusively at the public facilities, it is inevitable for private facilities to face economic challenges as utilization goes down as they are not contracted by the government to deliver COVID-19 services. As global budget allocations and diagnosis-related groupings are not utilized regularly in most countries in MNA, the reduction in demand will have an adverse impact on service capacity and readiness at health facilities. There remains a need to ensure purchasing systems are rationalized across public and private sectors.

Service delivery

Many MNA countries suffer from low quality of care as measured by health system outcomes, and there is insufficient cross-country data regarding the structure and process dimensions of quality of care. The only cross-country comparator of healthcare quality is from the

Institute of Health Metrics and Evaluation (IHME) Healthcare Access and Quality Index, which ranks countries in terms of the incidence of morbidity and mortality that should not occur in access to quality health care (e.g. amenable mortality), on a 0-100 scale. Data from 2016 point to low levels of quality of care in LMIC in MNA, particularly in Djibouti, Yemen, Iraq, Morocco, Egypt and Algeria, which also suggests low levels of structural and process measures of quality, such as the availability of water and sanitation, effective infection prevention and control, and adherence to guidelines. The high rates of amenable mortality present a particular risk in the face of COVID-19, given the fact that individuals with comorbidities are those most at risk from the epidemic. This rate of high comorbidities also highlights the low level of quality of care particularly at hospitals, which is where mortality rates are the highest. According to the Global Health Security Index, other than Morocco and Saudi Arabia, all countries in the MNA region face gaps in terms of infection control practices and availability of equipment, as well as health capacity in clinics, hospitals and community care centers, which further reduces structural quality of care and the readiness of health facilities to deliver both COVID-19 and non-COVID-19 services.⁹

Figure 4: Healthcare Access and Quality Access in MNA Countries, 2016¹⁰



⁹ Global Health Security Index, 2019 <https://www.ghsindex.org/>

¹⁰ Fullman, N., Yearwood, J., et al, 2018. Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational

locations: a systematic analysis from the Global Burden of Disease Study 2016. The Lancet 391, 2236–2271. [https://doi.org/10.1016/S0140-6736\(18\)30994-2](https://doi.org/10.1016/S0140-6736(18)30994-2)

COVID-19 is expected to impact service delivery negatively in MNA countries across all levels of care. First, given the overall decline in care-seeking due to lockdowns or social distancing, those most vulnerable to COVID-19, including individuals with chronic conditions that require them to regularly go to health facilities for check-ups or to fill prescriptions, will not be able to access these services, resulting in a net reduction of demand for non-COVID-19 conditions and resulting in significant mortality and morbidity risks. Second, given the expected significant increase in the demand for hospital and ICU bed capacity due to COVID-19, conditions that require inpatient visits or stays, including maternal and child health services, will also be negatively impacted. Third, the health system remains overly dependent on hospital care and private service delivery, which poses difficulties for coordinating the response to COVID-19 as well as for managing the impact of the epidemic on health system capacity. Certain countries such as Egypt and Morocco only deliver COVID-19 services in the public sector, and in the absence of contracting and purchasing arrangements, it is difficult for the government to expand surge capacity to respond to demand changes.

The inflexibility of service provision and a facility-centered model to case management both posit significant risks in coping with the disease burden imposed by COVID-19. Given the predominantly chronic burden of disease in the region, patients have to continue going to health facilities or pharmacies to refill their prescriptions or receive routine care and physicals, many of which could be avoided with a shift towards telemedicine or more flexible health service delivery arrangements, which are currently missing in the region. While telemedicine is already common in high-income MNA countries for NCD case management, its availability has been more limited in the LMIC countries in the region such as Egypt, Morocco, Algeria, Tunisia and Libya." Similarly, home based-care mobile medical units are not very common in the region, except for in Morocco.

Service delivery challenges are

particularly acute for the most vulnerable groups, such as women, displaced people, disabled people and the elderly. There are significant inequities in care-seeking in the MNA region, with women, refugees and the elderly facing higher odds of COVID-19 as well as a more significant impact from the disruption of existing health care services due to COVID-19. For these vulnerable populations, the social determinants of health, such as access to food, shelter, and income, are not sufficiently addressed. If these populations are isolated with proposed "shielding" approaches, they will need access to health and social services, which will need to be provided.

Physical resources

While there is a lack of cross-country evidence on physical resource capacity in MNA region, low and unequal capacity is seen in many countries, and COVID-19 imposes a shock in terms of constraining infrastructure investments. The capacity of physical resources remains very low particularly in areas impacted by conflict and fragility. This capacity is also unequally distributed within MNA countries, which exacerbates the impact of the conflict and reduces the readiness and capacity of countries in the region to both COVID-19 as well as other services. Low numbers of hospital (figure 5) and ICU beds in various settings present a significant challenge: Iraq, Tunisia and West Bank and Gaza all have less than 1,000 ICU beds, which is less than the peak demand expected for the COVID-19 epidemic. A cross-cutting challenge is the lack of flexibility in the health system capacity: most of the health system capacity in the MNA region is facility-based and there is a lack of surge capacity, which prohibits the agility to respond to the crisis. Hospital capacity, in particular, will be overburdened by the increased surge from COVID-19 cases. In order to respond to COVID-19, many countries are undertaking investments to purchase ventilators and other COVID-19 specific capacity expansion, which imposes a constraint on physical resources associated with non-COVID-19 services given the limited fiscal space, while the need to expand regular service capacity continues. In

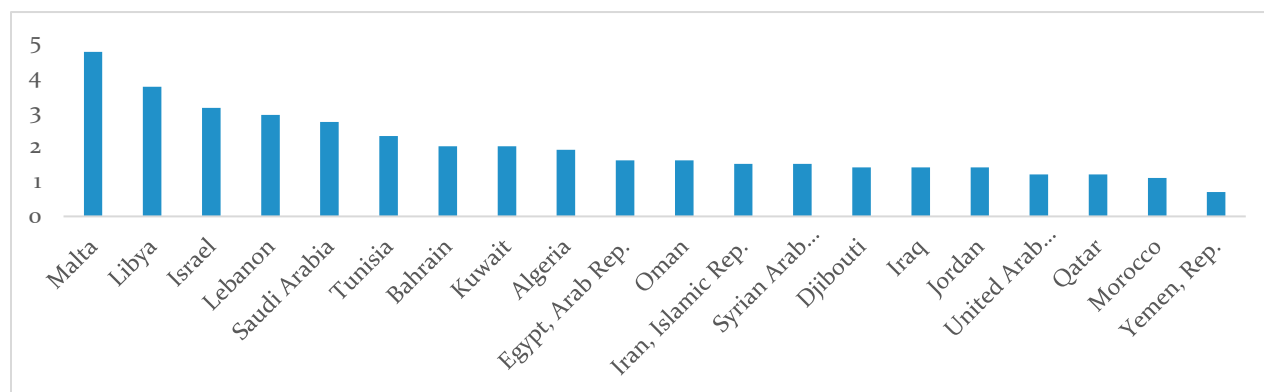
¹¹
https://www.researchgate.net/publication/328383175_What_Is_the_Ev

[olution of Telemedicine And e-Health in North Africa A Systematic Review](#)

addition to hospital capacity, most MNA countries have limited primary healthcare capacity, which

reduces their ability to manage non-COVID-19 services as well.

Figure 5: Hospital beds per 1,000 in MNA region



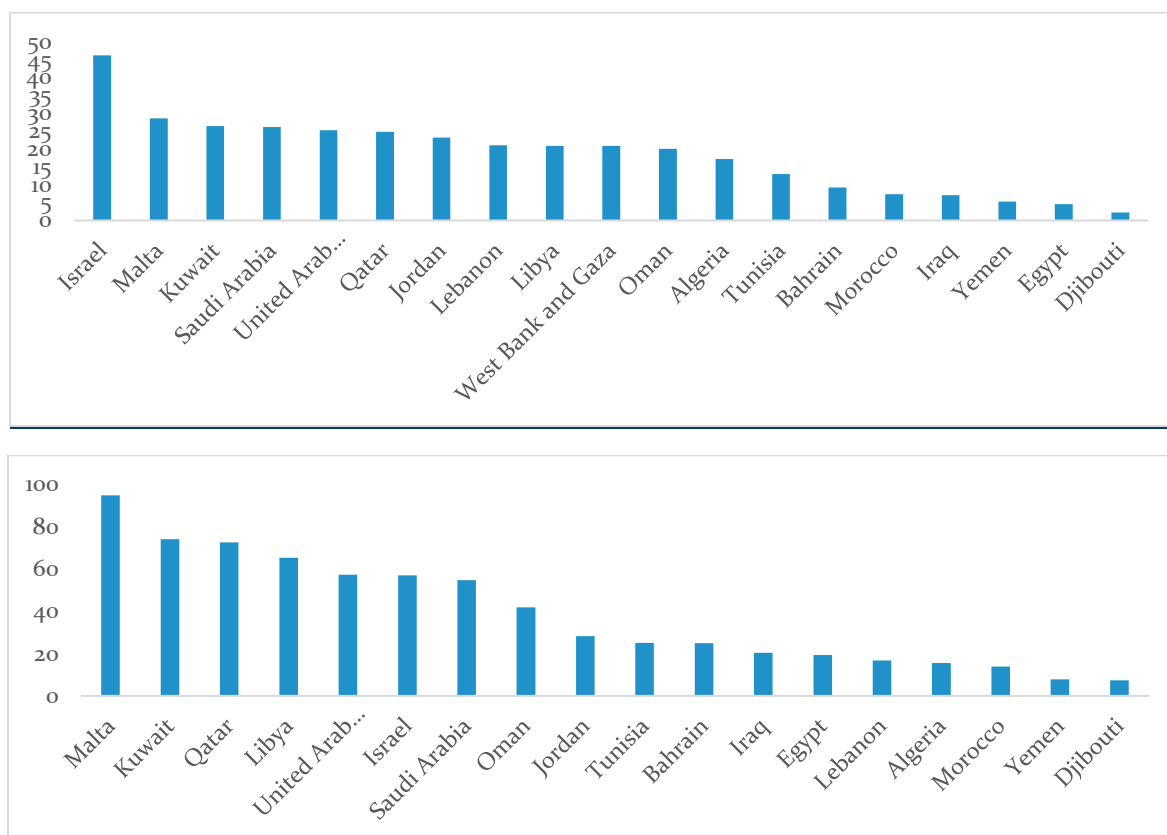
Human resources

Human resources suffer from the same challenge as physical resources, with unequal and inflexible capacity and distribution. Particularly in conflict settings, health worker capacity remains low, due to migration. Even outside conflict settings, MNA countries have some of the lowest densities of health workers, and challenges include skills mix, underemployment, inequality in geographic distribution and poor work environments (figure 6).¹² Egypt, Morocco, Iraq, Yemen and Djibouti in particular have very low levels of doctors

and nurses, and most MNA countries are below the WHO recommended threshold of 45 doctors, nurses and midwives per 10,000 population. Health workers are at particular risk, as many lack access to infection prevention control measures, which introduces risks to continuity of care. These are exacerbated by the lack of task-shifting and inflexible work arrangements, as well as lack of a community health workforce, which particularly poses a challenge to mitigate the increased demand on the health system with COVID-19.

¹² <https://www.who.int/alliance-hpsr/projects/middleeast-polforum/en/>

Figure 6: Medical doctors (top) and nurse and midwives (bottom) per 10,000 population in MNA region, latest available year¹³



Medicines and supply chains

Weak supply chains, essential medicine stock-outs and the lack of medical equipment such as personal protective equipment and laboratory reagents pose a significant challenge, both for COVID-19 and for other health services. COVID-19 is disrupting supply chains given the challenges with transportation, and supplies are being diverted from other health interventions towards COVID-19, which jeopardizes the delivery of non-COVID interventions. MNA countries already are impacted from unequal pharmaceutical spending due to a lack of unified risk pools, as well as an overreliance on external reference pricing which is potentially risky considering the current fluctuations

and shortages in the market.¹⁴

Governance and health information systems

Evidence-based governance is essential for enabling an adaptive response to the COVID-19 crisis, and many MNA countries lack strong information systems and pandemic preparedness capacity. In order to minimize the duration and severity of shutdowns and targeted quarantines, governments will need not only strong service delivery and physical and human resources to enable increased testing, but also strong data systems to enable them to track and respond to the changing disease dynamics. However, many MNA countries currently lack effective mechanisms to do so, both

¹³ WHO Global Health Observatory Data

¹⁴ Kanavos, P., Tzouma, V., Fonrier, A.-M., Kamphuis, B., Parkin, G.C., Saleh, S., n.d. Pharmaceutical pricing and reimbursement in the Middle East and North Africa region 154. <http://www.lse.ac.uk/business-and-consultancy/consulting/assets/documents/pharmaceutical-pricing-and-reimbursement-in-the-middle-east-and-north-africa-region.pdf>

within them and between them: at a high level, according to the 2019 Global Health Security Index¹⁵, almost all MNA countries are deemed as “least prepared” with regards to managing an epidemic, including in terms of real-time surveillance and reporting as well as epidemiology workforce. In addition to surveillance-related data, many MNA

countries also lack reliable health management information systems on routine data that is accessible at the facility level, which makes planning difficult. These information systems are essential for enabling good governance.

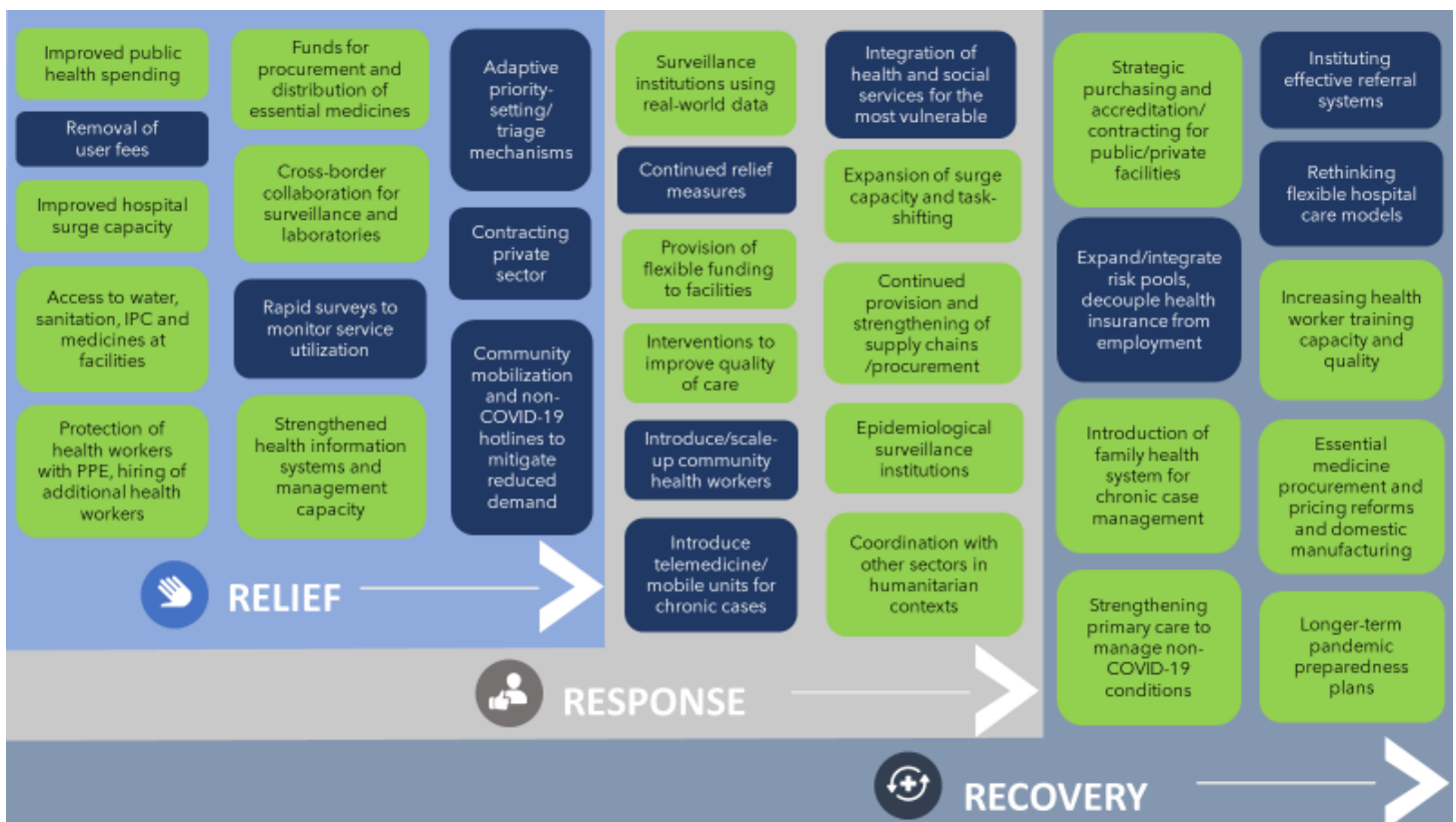
¹⁵ Global Health Security Index, 2019 <https://www.ghsindex.org/>

3. POLICY RECOMMENDATIONS

In order to respond to these challenges, Figure 7 shows potential policy responses to mitigate the impact of the COVID-19 epidemic on the health system, in terms of relief, response and recovery. It should be noted that these recommendations focus on non-COVID-19 services, and are intended to complement measures that are already taken to mitigate the impact of COVID-19. While these recommendations are presented across health system functions, the measures are dependent on and build on each other, and should be addressed in an integrated manner. Priority should be given to policies that target those most vulnerable (the poor, the elderly, pregnant women and children, the disabled, refugees and internally displaced people), as well as those with co-morbidities, and informal sector workers who are at risk of losing their income due to lockdowns. These solutions are across supply-side and demand-side, in order to ensure that demand for the non-COVID-19 services is not reduced dramatically. It should be noted that while interventions are demarcated across supply- and demand-side, each of the proposed measures effectively target both: investments in the supply-side will be instrumental in ensuring demand is maintained.

Figure 7: Summary of policy recommendations across phases

Blue: demand-side; green: supply-side



Financing

COVID-19 demonstrates the urgent need to reform the health financing arrangements in MNA countries across revenue raising, pooling and purchasing functions, and prioritizing health in the government budget has the potential to mitigate not just the health impact but also the economic impact. In order to minimize service interruptions, one of the first inputs is reliable, pooled and well-allocated financing from the government. While it will be difficult for governments in the MNA region substantially increase the funds available to the health sector given the overall fiscal space constraints, in the short- to medium-term, governments can reallocate budgets from various other areas to health. Prioritizing health in the government budget would enable a rapid surge of health system capacity, which would reduce the duration of any potential shutdown and as such reduce the economic burden of the crisis. This might need to be coupled with relevant public financial management reforms, ensuring flexibility as well as accountability, through measures such as program-based budgeting and the pooling of resources across different ministries around a policy goal.¹⁶ These interventions should also be coupled with transfer of flexible funds to facilities such as in the form of block grants, which would improve the responsiveness of facilities to respond to emergency needs.

In addition to strengthening the supply-side, there is also the need to reduce user fees to mitigate reductions in demand. As demand for non-COVID-19 service utilization is expected to decline, a way to mitigate this decline would be to eradicate user fees for all essential services at all levels, particularly given the high levels of out of pocket spending in the region. This would also help accelerate progress towards universal health coverage and scale-up of health insurance, as well as ensure continuity of services and help save future expenses due to delayed care-seeking. As indicated above, the only way to finance this would be to ensure improved fiscal space in the government budget.

The difficulty of increasing additional

funds points to the importance of increasing efficiencies and equity through the pooling and purchasing functions. With respect to pooling, countries should consolidate and expand their fragmented risk pools to cover a larger share of the population to ensure minimal out-of-pocket spending for both COVID-19 and non-COVID-19 interventions. While many countries have schemes for those employed in the formal sector, or the poorest and the most vulnerable, these schemes may suffer from underfunding. Further, in most countries, those in the informal sector do not have access to health insurance schemes; hence, health insurance provision should be decoupled from employment. Community-based health insurance could be an option to scale up in the medium-term. Finally, in order to ensure efficiency and cost-control especially with respect to purchasing services from the private sector, there is a need to scale up strategic purchasing and contracting for public and private facilities based on benefits packages defined on the basis of cost-effectiveness. Through reforms in revenue raising, pooling and purchasing, stakeholders should seek to improve equity and efficiency both through the response and recovery, using this as an opportunity to accelerate reform processes that have already been started.

Service delivery

In order to mitigate the reduction in demand for non-COVID-19 services, countries should triage service delivery and involve the private sector. Many countries have designated only public hospitals for managing COVID-19 patients. Given the overreliance on hospitals for service delivery, it is likely that care will be disrupted in communities that relied on these centers, particularly given the weak primary sector. In the short-run, the government should contract service delivery to private facilities for non-COVID-19 services, and ensure triaged service delivery at health facilities through tents or other physical barriers. In addition, to ensure that public hospitals can continue delivering other essential services, some of the COVID-19 burden should be shifted towards contracted private facilities which already possess the

¹⁶ WHO, 2020 "How to budget for COVID-19"
https://www.who.int/docs/default-source/health-financing/how-to-budget-for-covid-19-english.pdf?sfvrsn=356a8077_1

capacity to treat these patients. As indicated in the financing section, these contracting measures should be complemented with improved financing and cost controls to ensure households do not incur significant expenditures. The government should also introduce simplified contracting protocols and public financial management rules, as well as accreditation and empanelment criteria, to ensure private providers are regulated and adhere to government priorities.

An effective short-term intervention in managing both COVID-19 and mitigating the impact of COVID-19 on regular services is the introduction and scale-up of community health workers (CHW). There is a significant body of research on the effectiveness of CHW both in terms of responding to pandemics such as COVID-19 as well as in ensuring the delivery of essential prevention and treatment services.¹⁷ CHW also have a significant potential to generate demand in the face of COVID-19, enabling the connection of patients to the health system and ensuring utilization does not decline significantly for key services. While various MNA countries have community health workers, there is room to scale up their involvement and competency, in particular for the most at-risk populations. In order to do so, a four-pronged strategy, focusing on protecting health workers, interrupting COVID-19, maintaining health services while surging their capacity, and shielding the vulnerable is needed.¹⁸ Countries should define a care package for community health workers, who would have access to necessary infection prevention control (IPC) equipment, and be trained to conduct contact tracing, deploy rapid diagnostic tests for COVID-19, as well as key non-COVID-19 services such as prevention and basic case management for non-communicable diseases, immunizations, and maternal health services. CHW particularly have a significant role to play in delivering interventions to shielded and vulnerable communities, such as the elderly or those in quarantine, not only for health services but also nutrition and social services. CHW would also be able to assist in sensitization and community outreach on water, sanitation and

hygiene, both for COVID-19 as well as other services, and they would also be able to deliver an integrated package of social services as needed.

Another important short-term intervention is to move towards a patient-centered model of care, introduce telemedicine and easier prescription practices for chronic case management, as well as improve the flexibility of service delivery. As they triage COVID-19 services from non-COVID-19 services to ensure patients without COVID-19 can seek care without infection risks, MNA countries should scale up telemedicine services, which should be done in the short-term. Telemedicine services would be able to address a wide range of services, including mental health and psychosocial support, the demand for which is expected to go up with the pandemic. While telemedicine is scaled up, another key short-term intervention is to enable longer-term prescription of drugs for health workers, and moving towards a patient-centered model of care, which will also be facilitated with community health workers. These digital innovations improve the flexibility of service delivery in hospitals, enabling them to manage both COVID-19 and non-COVID-19 cases effectively. In remote areas, telemedicine can be complemented by mobile medical units which can deliver essential prevention and treatment services, particularly for non-communicable diseases. Finally, moving towards home-based care modalities and defining contracting and provider payment modalities for these modalities would also improve the flexibility of service delivery and ensure continuity of non-COVID-19 services.

In the medium- to long-term, family medicine and primary care networks are an important mechanism to mitigate the interruptions by COVID-19 to health service delivery and ensure continuity of care. While many MNA countries, such as Egypt and Morocco, are already in the process of strengthening primary care systems to develop integrated family health models, other countries in the region also need to do so. A strong family health and primary health care system will also enable a more effective management

¹⁷ <https://chwimpact.org/research-round-up/#028>

¹⁸ https://docs.google.com/document/d/1quxz5up90vWcbxb6HNHJ_vpsd_hKP70pfjxrROTLa6Pc/mobilebasic

of referrals, ensuring that hospital capacity is available for the most critical COVID-19 and non-COVID-19 cases, whereas routine care can be handled at the family health and primary health level, with integration with the community health workforce. Effective continuity and coordination of care, which is facilitated by a family medicine system, is a strong lever in mitigating the impact of COVID-19 and future epidemics on the health system.

Physical and human resources; medicines and supply chains¹⁹

In the short-term, it is essential to strengthen physical and human resources to cope with the increased demand from COVID-19 and ensure continuity of services. Key immediate actions include ensuring access to water, sanitation, infection prevention control including personal protective equipment, electricity and essential medicines in every facility and for every health worker including CHW. As health workers are the most at risk for COVID-19 infection, it is also essential to focus on their protection, in order to not cause any further reductions in the health workforce. More health workers should be hired where possible at all levels, and task shifting to ensure maximum effectiveness for nurses and clinical officers should be implemented, with supportive supervision and training to ensure quality of care and adherence to guidelines. Ensuring clinical competency is essential, and plans should be implemented to train health workers rapidly, in light of the changing clinical evidence. Strengthening supply chains, ensuring continuity in the manufacturing of domestic pharmaceuticals, and strengthening of procurement mechanisms are all essential in reducing the shock of COVID-19 on the health system. Investments in domestic production capacity and “stockpiles” for emergency reserves will be needed for all physical resources, including drugs, medical equipment and other IPC commodities that will need to be scaled up strategically in future waves of COVID-19 and other potential pandemics. In partnership with the private sector, countries should scale up their ability to manufacture generics and personal protective equipment, given challenges in the international

markets.

Another important emergency action with implications for physical and human resources is the establishment of integrated health and social services for the most vulnerable such as the elderly. For those that are in lockdowns or for those that are shielded, additional infrastructure and health workers will be needed to ensure they can still access health services. Where possible, and especially in humanitarian settings, these services should be integrated with other measures of social support, such as food and livelihood assistance and other social services. The establishment of these services would ensure demand does not decline significantly.

In the medium- to long-term, it is essential to continue increases in primary health infrastructure and increases in health worker training capacity. In order to ensure a high quality of care and to increase case management in the primary care level as to not burden the health infrastructure, there is a need to refocus on expanding the primary and family health infrastructure. A focus on the primary care level will also assist in reducing the current inequities in staff distribution. In order to support service delivery at this level, additional health workers should be trained at all levels, which in the long-term will assist in closing health worker gaps.

Governance and health information systems

A first step is to focus on strengthening management capacity to enable an adaptive response to COVID-19, as well as coordinate with other sectors. COVID-19 is not a short-term issue, and even if the first wave subsides within the next 3-6 months, it is expected to come back in subsequent waves, given the difficulty of sustaining lockdown measures. In order to ensure mitigated impact, there is a significant need to strengthen management capacity and focus on a phased approach. Key considerations to track in this manner from a governance perspective include: the ability to start contact tracing; the ability to hold daily briefings and

¹⁹ These areas are addressed collectively as they will need to be scaled up concurrently.

coordination; the ability to protect health workers with policies, training and sufficient personal protective equipment; enabling a safe surge for health systems to care for large numbers of mildly ill patients, a large increase in patients needing intensive care, and for patients needing ongoing non-coronavirus care; a system in place to resume targeted or general social distancing measures rapidly if needed; capacity to support nutrition, learning, physical and mental well-being, and social needs during sheltering in-place; community engagement with assessment of community perceptions and behaviors and effectiveness of messaging; and finally, rapid and smooth coordination with decentralized entities.²⁰ These measures by nature necessitate coordinating with other sectors, particularly in humanitarian settings, to implement a system-wide approach ensuring both the health and social needs of populations are met. For example, it is essential for health and nutrition assistance to be aligned, to ensure communities do not suffer from food insecurity, particularly in conflict settings.

It is crucial to improve regional epidemiological surveillance and early warning institutions to enable the use of real-world data, which should start in the short-term and continue into the medium- and long-term to improve data systems. These institutions will assist in tracking the aforementioned aspects of the epidemic, and should coordinate regionally and locally within the MNA region, as well as with the Africa CDC and World Health Organization regional offices. Financing for these institutions should come from all countries in the region, as this is a common good for health. While many regions have surveillance institutions that coordinate with each other, the Middle East and North Africa region does not, despite the significant trade and migration links across countries; in the short-term, the necessary steps to form a regional surveillance center should be taken. These steps should also be complemented by more proactive coordination and exchanges between the public health institutions and laboratories of the countries in the region. Together with strengthened management capacity, these measures will assist in

enabling an adaptive response for lifting and re-introducing social distancing where necessary, and also enable a continued build-up of public health capacity for testing, contact tracing, isolation of sick people and quarantining of contacts. Effective surveillance is essential for the identification and test of suspected cases, tracing and testing contacts, monitoring linked and unlinked chains of transmission and monitoring healthcare worker infections. This would enable a transition towards tailored lockdowns, and with improved data, it would be possible to eventually predict vulnerable populations, places, professions and events, as well as conduct predictive epidemiological modeling and estimate adherence to specific non-pharmaceutical interventions and estimate their impact on the epidemic. Finally, it is essential that these platforms are utilized to build on the nexus of health, social support and food security, ensuring complete access of individuals to these key services.

Effective communication campaigns are crucial for both COVID-19 and routine health services. In particular, there is evidence from Jordan, West Bank and Gaza and Lebanon in the effectiveness of community-focused behavior change campaigns in facilitating behavior change and reducing NCD risk factor, through collaboration with community partners and leaders, developing peer coaching and education activities to foster healthy behaviors, and promoting empowerment and self-management.²¹ Many governments are currently planning COVID-19-specific communication campaigns, which are essential in ensuring the public adheres to crucial prevention measures on social distancing and hygiene, as well as other health and nutrition aspects. It is crucial to ensure these campaigns also include information on routine services such as maternal health, immunization and NCDs, in terms of both prevention and treatment. Community health workers can play an important role in ensuring these messages are delivered, in addition to government authorities prioritizing reliable communication particularly through social media and establishing hotlines to be able to provide up-to-date information, customizing content as

²⁰ Frieden, 2020 "Considerations for COVID-19 policy response"

²¹ McNatt, Z "Leveraging community strengths to prevent NCDs among urban refugees and host populations in Jordan"

https://www.mailman.columbia.edu/sites/default/files/pdf/leveraging_community_strengths_policy_paper_1.pdf

necessary and mitigating declines in demand.

In the meantime, governments will need to improve health information systems and data collection, which will enable them to respond to reduced demand for non-COVID-19 services as well as institute adaptive triage and priority-setting mechanisms. It is crucial to complement improved epidemiological surveillance and COVID-19-specific data together with improved data collection for non-COVID-19 services, which will also enable the strengthening of the routine health information system. A first step is to set up systems to collect data on key indicators of health financing and service utilization, including continuous household surveys or health management information systems which provide in-time data on service demand and utilization, as well as on facility capacity focusing on structural and process dimensions of quality of care, for which evidence is currently scarce. On the demand side, rapid “pulse surveys” can be implemented to monitor changes in non-COVID-19 service utilization and demand, enabling policymakers to respond rapidly to declines in service utilization. On the supply side, more data is needed from routine administrative systems on the state of the health system capacity, in order to enable evidence-based planning and resource allocation. Health information systems should be scaled up during the response and recovery phases to enable monitoring the impact of COVID-19 on non-COVID-19 services. Digital health systems can be leveraged in ensuring rapid and low-cost data collection. The data collected from these campaigns should be used in informing the government’s communication campaigns, ensuring citizens have access to reliable information on where they can seek services for non-COVID-19 services.

Moving towards recovery, given the constraints in all health system inputs and increasing demands, governments will need to introduce and institutionalize health technology assessment and priority-setting mechanisms. With this data, countries should institute and implement health technology assessment methods to determine which priority services or health technologies to introduce or scale-up in a cost-effective and equitable manner. These institutions can also assist in the contracting mechanisms for private facilities, ensuring cost control, continuity of services and quality of care.

4. OPPORTUNITIES FOR WORLD BANK HEALTH, NUTRITION AND POPULATION RESPONSE

There is a need for increased analytical and policy support in the region. While this note highlights a wide range of potential intervention areas across all functions of the health system, it will have to be tailored to the individual context of the countries in the region, all of which present diverse needs and contexts. Policy support will particularly be needed in implementing innovative solutions improving the flexibility of service delivery, particularly with regards to digital health solutions. There is already a wide range of policy support in the region on financing, and this will need to continue to take into account the changing landscape and increased demands due to COVID-19.

Both analytical and policy support should be under the umbrella of the MNA Human Capital Plan, which prioritizes protecting human capital of vulnerable groups and building their resilience against non-communicable diseases (NCD). In particular, the plan promotes a shift from curative care towards prevention and early diagnostics, as well as the promotion of behavioral change and addressing underlying risk factors such as smoking and poor nutrition.²² As COVID-19 disproportionately impacts those with chronic conditions and smokers, a renewed focus on this area under the human capital project is crucial.

World Bank's Health, Nutrition and Population (HNP) global practice can support

countries in the MNA region in designing and implementing these interventions, providing knowledge products, real time technical assistance and operational support through relief, response and recovery. HNP GP MNA can provide analytical and technical assistance support to better contextualize these health system assessments to respond to the rapidly changing landscape due to COVID-19. Through the COVID-19 fast track facility, World Bank has already mobilized funding in Djibouti, Egypt, Jordan, Yemen and West Bank and Gaza, and projects are currently under discussion and prepared in Algeria, Iraq, Morocco and Tunisia. Current operations in Egypt, Lebanon, Jordan and Morocco already include components across different functions of the health system that can mitigate the impact of COVID-19 on the health system (Table 2), usually through improved service delivery through primary care, as well as health financing reform through insurance or specific targeting of vulnerable groups. It is possible to build on this existing portfolio, either with additional financing or with new projects, to address gaps that are not already addressed, especially in the areas of governance and health information systems, human resources, supply chains and physical resources. Finally, it is also possible to add on these interventions by implementing interventions which explicitly focus on improving quality of care at hospitals in the medium run, in order to cope with the pending increasing demand at facilities.

²² Middle East and North Africa Human Capital Plan, <http://pubdocs.worldbank.org/en/907071571420642349/HCP-MiddleEast-Plan-Oct19.pdf>

Table 1: Supply- and demand-side policy responses to mitigate the impact of COVID-19 epidemic

<u>Health system function</u>	<u>Relief (0-6 months)</u>	<u>Response (6-12 months)</u>	<u>Recovery (beyond a year)</u>
Financing	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Reallocation of government budget from other areas to health <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Removal of user fees for essential health services in public and private facilities; integration with other safety nets 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Continued emergency measures • Provision of flexible funding to facilities 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Scaling up of strategic purchasing and contracting for public and private facilities, based on cost-effective packages <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Expansion and integration of risk pools, decoupling of health insurance from employment
Service delivery	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Surge capacity at hospitals • Triage COVID-19 and non-COVID-19 services, involving the private sector • Trainings and simulations to improve responsiveness <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Triage service delivery to ensure minimized disruption to non-COVID-19 services 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Institutionalization of interventions to improve quality of care <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Introducing or scaling up community health workers, particularly for quarantined contexts and for the most vulnerable • Introducing telemedicine and easier prescription practices for chronic case management 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Introducing family health system for chronic case management • Strengthening primary health care to manage non-COVID-19 conditions <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Instituting effective referral systems

Physical resources	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Ensuring access to water, sanitation, infection prevention control, electricity and essential medicines in every facility, particularly at hospitals 	<p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Establishment of integrated health and social services infrastructure to protect and deliver targeted interventions for the most vulnerable and at risk such as the elderly 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Increasing primary health infrastructure <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Rethinking hospital care models – greater flexibility in use, increased focus on patient safety and infection control
Human resources	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Focus on protection of health workers, prioritizing testing and PPE equipment for them; ensure access to IPC and water/sanitation for every health worker • Hiring and training of health workers for surge capacity 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Expansion of surge capacity and implementing task-shifting, coupled with supervision 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Increasing health worker training capacity and quality
Medicines and supply chains	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Ensure sufficient funds for procurement and distribution of essential medicines 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Continued provision and strengthening of supply chains and procurement 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Reform essential medicine procurement and pricing mechanisms • Investments in domestic production capacity and “stockpiles” for emergency reserves
Governance, communication and health information systems	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Improve cross-border collaboration between countries to incentivize 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Establish epidemiological surveillance institutions enabling the use 	<p><i>Supply-side:</i></p> <ul style="list-style-type: none"> • Improved data systems to measure structural and process dimensions of quality of care to

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| <p>information sharing on surveillance and laboratory services</p> <ul style="list-style-type: none"> • Strengthen management capacity for adaptive response to COVID-19 <p><i>Demand-side:</i></p> <ul style="list-style-type: none"> • Improve health information systems and monitor utilization changes due to COVID-19 especially among the poor and vulnerable, with rapid surveys • Communication and community mobilization campaigns, and non-COVID-19 hotlines • Design and implement adaptive triage and priority-setting mechanisms | <p>of real-world data</p> <ul style="list-style-type: none"> • Coordination with other sectors particularly in humanitarian settings to implement a systems approach | <p>enable governing for quality</p> <ul style="list-style-type: none"> • Investment in longer-term pandemic preparedness plans • Introduction of accreditation and contracting mechanisms for private facilities |
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Table 2: Current HNP GP MNA portfolio, with COVID-19 mitigation opportunities in bold

<u>Country/Project</u>	<u>Summary and relevant activities to mitigating the impact of COVID-19 on health system</u>
<p>Djibouti Improving Health Sector Performance (P131194), 2013-2020</p>	<p>PDO is to improve the utilization of quality maternal and child health services. Components include improving health service delivery performance, strengthening health system management and strengthening program management. Indicators focus on women completing ANC visits, full immunization of children and average health facility quality.</p>
<p>Djibouti Towards Zero Stunting in Djibouti (P164164), 2018-2023</p>	<p>PDO is to reduce stunting among children under five. In order to do so, the project engages community health workers to refer pregnant women to health facilities for ANC and child visits to reduce stunting.</p>
<p>Egypt Supporting Egypt's Universal Health Insurance System (P172426), 2020-2024</p>	<p>PDO is to increase the coverage of Egypt's Universal Health Insurance System in Phase 1 governorates and to strengthen UHIS-related governance and institutions; seeks to increase primary health care visits and utilization as well as reduce out of pocket spending</p> <p>Potential to mitigate COVID-19 impact on financing and governance.</p>
<p>Egypt Transforming Egypt's Healthcare System Project (P167000), 2018-2023</p>	<p>PDO is to improve the quality of primary and secondary health care services, enhance demand for health and family planning services, and support the prevention and control of Hepatitis C. Progress recorded in tracked indicators, including number of health facilities (primary and secondary) improving in quality of services, as well as increased household visits by community health workers. Improvements in patient satisfaction, increases in targeted people screened for NCDs, and improvements in hospital capacity are also relevant improvements.</p> <p>Potential to mitigate COVID-19 impact on service delivery.</p>
<p>Jordan Emergency Health Project (P163387), 2017-2023</p>	<p>PDO is to support the Government of Jordan in maintaining the delivery of primary and secondary health services to poor uninsured Jordanians and Syrian refugees at MOH facilities. Specifically targets the poor and the vulnerable who are set to suffer disproportionately from COVID-19 with regards to services delivered at MOH primary and secondary facilities, and develops an improvement of primary care quality plan.</p> <p>Potential to mitigate COVID-19 impact on service delivery.</p>
<p>Lebanon Health Resilience Project (P163476), 2017-2023</p>	<p>PDO is to increase access to quality healthcare services to poor Lebanese and displaced Syrians in Lebanon. The project includes delivery of gender and age specific wellness packages, prevention and care packages for the most common NCDs, reproductive health and</p>

mental health package, which has the potential to assist in strengthening the health system capacity as well as scaling up primary health care and training health workers.

Potential to mitigate COVID-19 impact on financing, service delivery, governance and human resources.

Morocco Health Support Project (P148017), 2015-2020

PDO is to expand access to primary health care in targeted rural areas in the program area; PforR operation seeking to improve antenatal care visits, skilled deliveries, number of sick child visits, diabetes diagnosis and treatment, visits to rural primary health centers, participation of health facilities to quality competitions, and establishment of a national health management information system.

Potential to mitigate COVID-19 impact on service delivery, governance and human resources.

West Bank and Gaza Health System Resiliency Strengthening Project (P150481), 2015-2021

PDO is to support the Palestinian Authority in securing continuity in healthcare service delivery and building its resilience to withstand future surge in demand for effective healthcare coverage. Indicators focus on utilization rates improving in key hospitals, reduced rate of OMRs, and reduced gap in geographic equity for referral cost.

Potential to mitigate COVID-19 impact on financing and service delivery.

Yemen Emergency Health and Nutrition Project (P161809), 2017-2022

PDO is to contribute to the provision of basic health, essential nutrition, water and sanitation services for the benefit of the population of the Republic of Yemen. Indicators on people receiving services, access to improved water sources, cholera vaccines, health facilities with equipment and medical supplies, and health worker training.

Potential to mitigate COVID-19 impact on service delivery, physical and human resources, as well as WASH.



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