GLOBAL INNOVATION HUB
for Improving Value in Health

Drivers and Barriers for Implementation of Value-based healthcare in Middle East and North Africa (MENA) region

The Global Innovation Hub for Improving Value in Health brings together countries and international organizations in a partnership for learning and collaboration on value-based healthcare, and to work together to expand the delivery of value-based care at scale.

Lead Author:
Terrina Govender

Contributors:
Dr. Reem Al Bunyan
Ebele Anidi
IQVIA
Global Initiative on Health and the Economy

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EXECUTIVE SUMMARY

The concept of Value-Based Healthcare (VBHC) is gaining increasing momentum in Health Systems in the MENA region. Multiple countries in MENA have begun their transformation towards VBHC. The concept of VBHC emphasizes efficient decision-making and resource allocation at several levels of the health systems to effectively manage current threats, while contributing to the health system transformation and sustainability.

There has been limited research conducted on the state of VBHC in MENA, as well as the drivers, barriers and opportunities related to VBHC. This report looks at Oman, Kuwait, Kingdom of Saudi Arabia (KSA), the United Arab Emirates (UAE), Bahrain, Egypt, Algeria and Qatar.

There are several factors contributing to the rise of VBHC in MENA. (i) Rising healthcare costs coupled with economic slowdown and an aging population highlight the need to reimagine health systems. (ii) Healthcare models in the MENA region are predominantly fragmented, supply-driven, and reliant on a bulk payment fee for service model (FFS). (iii) MENA countries have significantly higher burden of Non-Communicable Disease (NCD) particularly cardiovascular disease, and diabetes compared to global average (74%).

Healthcare leaders and policy makers have tried to address system challenges by providing various cost containment strategies in an attempt to offset an increase in healthcare expenditure. But most of these measures are often short-term with no long-lasting impact on healthcare systems and populations.

The MENA region shares several barriers to VBHC adoption. Most barriers will need to be addressed at the national level. Some of the key challenges include Reliance on traditional payment models; Complexity in regulatory ecosystem; Collection and maintenance of patient data; Lack of healthcare infrastructure, awareness and understanding for proper deployment; Gaps in operational capability; Minimal private sector engagement and awareness; Unpredictability of revenue stream; Complexity of revenue risks; High OOP expenditure; Lack of availability of skilled and optimum workforce.

The findings of the report validated that all health systems are in various stages of implementing VBHC in MENA. The large majority of the MENA countries studied are already considering integrating VBHC elements into their healthcare design and delivery. Although there is a baseline for VBHC, efforts towards VBHC are largely piecemeal and not unified into a coherent strategy.

The study also identified that all stakeholders identified NCDs are a key priority area for transitioning to VBHC however there remains a lack of clarity on comprehensive approach to implementation.

Key Considerations for VBHC in MENA:

- Policy makers should consider increasing the awareness of VBHC among all the stakeholders including providers and patients across the MENA region.

- Establish an effective policy ecosystem in MENA aligning stakeholders towards the goals of achieving better outcomes.

- Test, transition, and scale innovative payment models and mechanisms. Transition to alternative payment models such as capitation, pay for care, pay for performance, MEA, RSA, and bundled payments for procurement of innovative and expensive therapies.

- Develop a robust data infrastructure to enable measurement of costs and outcomes to drive continuous improvement underpinning VBHC.

- Measure outcomes that matter to ensure health systems are realizing the benefits of VBHC.

Countries across the MENA region are witnessing a paradigm shift in their healthcare system. A shift towards VBHC is critically important for this transformation, with the unique opportunity to lower healthcare costs, improve the quality of care, and help people lead healthier lives. Though there are similarities across the region with respect to awareness, drivers, and barriers of VBHC, there are region-specific nuances that need to be considered while strategizing VBHC for its successful implementation.

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INTRODUCTION

Value-Based Healthcare (VBHC) has become an important element of health system redesign at the country level and also at multilateral fora, such as the G20. In the Middle East and North Africa (MENA) region, this concept has recently gained importance and is being propagated across the healthcare systems. However, the design, policies, and implementation of VBHC across the MENA regions varies based on the requirements and perceptions of different stakeholders (policy makers, government payers, regulators, market experts and academics. This gap in regional analysis created an impetus to assess the key drivers and barriers for implementation of VBHC and understand the existing gaps in delivery of VBHC models in MENA region.

METHODOLOGY

The methodology for the study leveraged the inputs from primary and secondary research including an extensive literature review, development of evidence-based discussion guide, stakeholder identification and segmentation, qualitative interviews with individual stakeholders, and analysis and reporting of the expert's opinion together with the evidence in literature to obtain key insights. The countries identified for the research study were Kingdom of Saudi Arabia (KSA), United Arab Emirates (UAE), Egypt, Algeria, other GCC countries (Qatar, Bahrain, and Oman).

Interviews were conducted with key opinion leaders (KOLs) and experts as part of the primary research. The stakeholders were selected on the basis of their expertise and their leadership roles in their respective organizations and defined the geographic scope. They represented different sectors of the healthcare ecosystems such as policy makers, government officials, payers, regulators, market experts and academicians. Each participant was asked a set of structured questions capturing various elements of VBHC.

Secondary desk research was performed based on what was currently available literature for VBHC, focusing on the basic driving forces for implementation and knowledge gaps and challenges faced by the healthcare system. The data sources identified were published literature, and several open-source document including publicly available documents from the Ministry of Health (MoH) of different

countries in the MENA region among others.

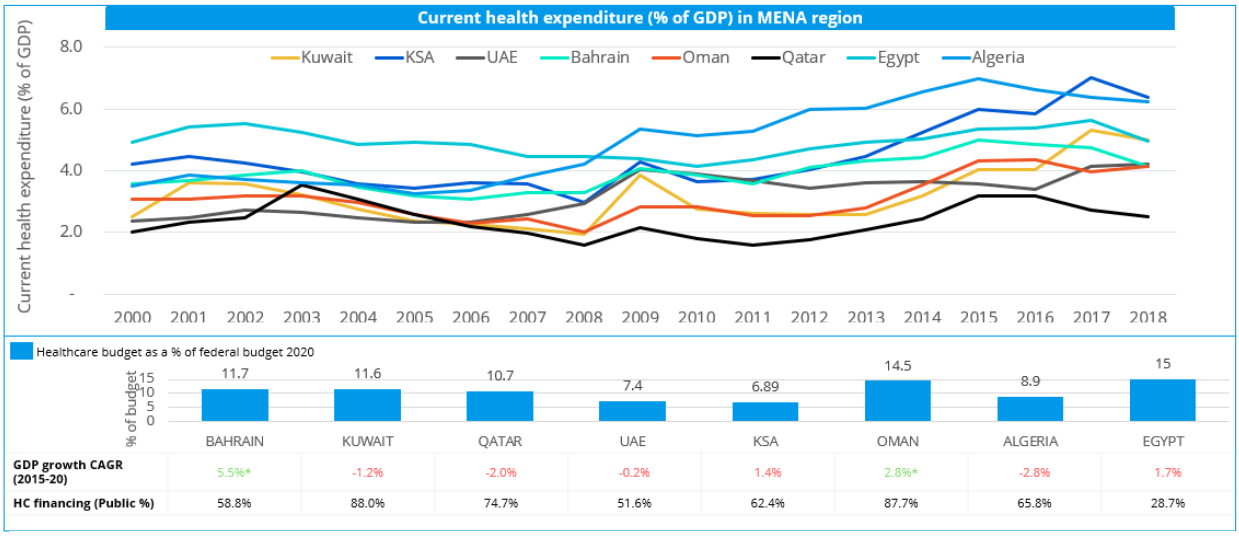
The inputs extracted from the primary and secondary research were compiled in the form of a detailed transcripts (excel-based tool) and then analyzed based on the quantitative and qualitative insights. The outcomes of this analysis were then compared and complemented with the initial secondary research findings (evidence from published literature) into the final report.

HEALTH SYSTEM CHALLENGES IN MENA

The concept of Value-Based Healthcare is gaining increasing momentum in Health Systems in the MENA region. Experts agree that VBHC provides a cohesive solution to challenges health systems are facing with the shifting population, health dynamics, and accelerated scientific discovery.

Rising healthcare costs coupled with economic slowdown and an aging population highlight the need to reimagine health systems. In the Gulf Cooperation Council (GCC) nations which include Oman, Kuwait, Kingdom of Saudi Arabia (KSA), the United Arab Emirates (UAE), Bahrain, and Qatar, the healthcare expenditure will also continue to rise, and it is expected to reach US$104.6 billion in 2022, up from US$76.1 billion in 2017.

The 60+ age group is expected to double by 2050 for all the MENA countries, adding pressure on their respective healthcare systems. This, in turn, will pose a serious threat to healthcare system sustainability and their ability to provide better access to safe, high-quality healthcare to all citizens at regional, national, and international levels. Therefore, health and finance ministries have to balance this need for sustainable health systems in the context of an increasing demand for healthcare services, limited budgets and dwindling public resources.



Source: Source: World *Bank, National Budget Reports, Ministry websites*, US COC, Need Gap Analysis on Value based Healthcare Delivery in MENA Region

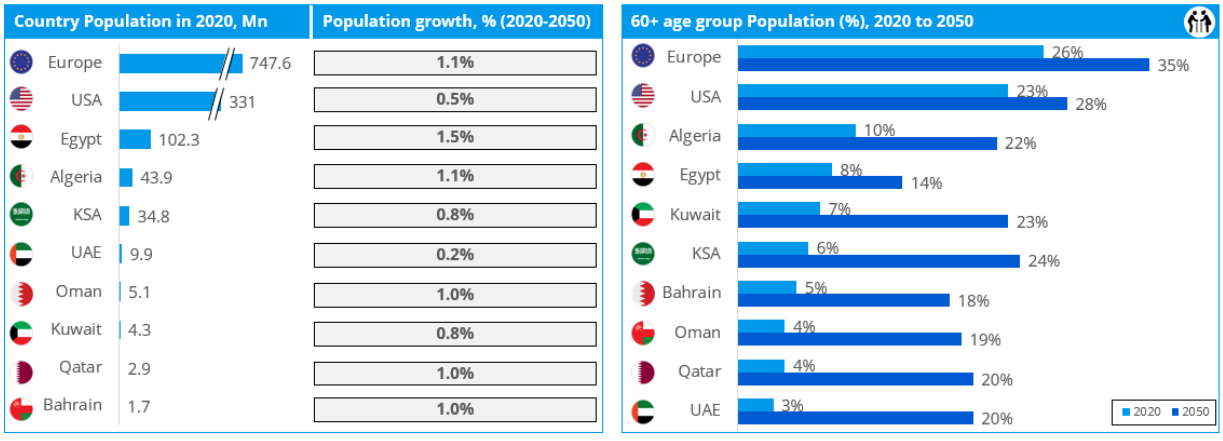
Healthcare models in the MENA region are predominantly fragmented, supply-driven, and reliant on a bulk payment fee for service model (FFS). System inefficiencies lead to wasteful spending, worse health outcomes and the increased potential for harm. The primary focus is on paying for inputs and volume of the services provided such as physician visits, hospitalizations, procedures, tests, and the profit generated from either of these factors

This healthcare system design is not sustainable as it is reactive to the only ever-increasing volumes of activities and services, but not best possible health outcomes that matter to patients. Healthcare providers and payers are still relying heavily on traditional FFS model as it is convenient and well established at a national level and hence don't want to take any unnecessary risks in trying innovative value-based payment models.

Tenders for purchasing pharmaceuticals and medical technology have become one of the most commonly used tools. Though this approach can produce immediate cost savings, it gives less impetus to the value of care and may also slow the adoption of new technologies or infrastructure that might change course of the treatment resulting in improved health outcomes for the population.

Healthcare leaders and policy makers have tried to address system challenges by providing various cost containment strategies in an attempt to offset an increase in healthcare expenditure. But most of these measures are often short-term with no long-lasting impact on

Demographical trends: Western countries vs MENA



Source: Source: UN World population prospects 1

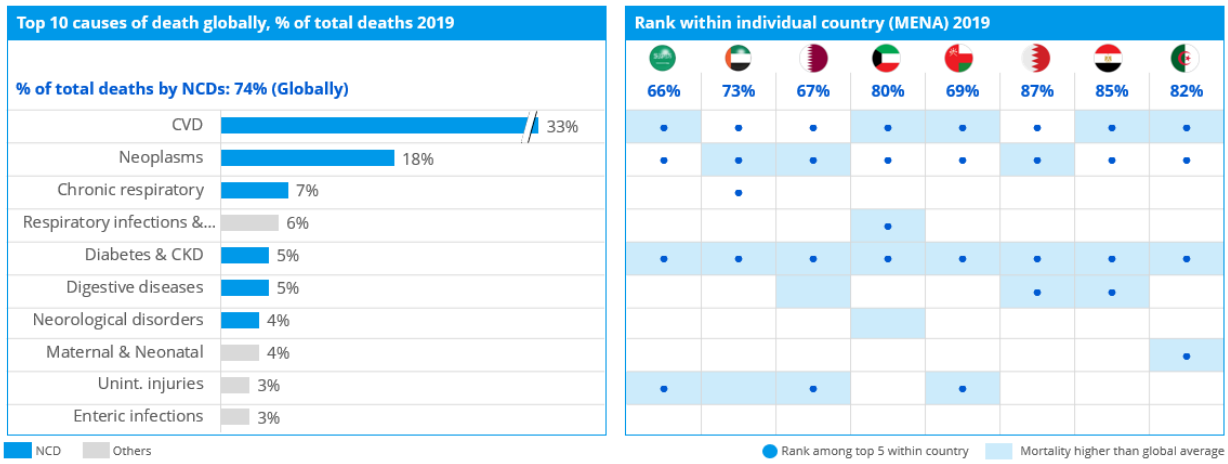
healthcare systems and populations. Moreover, the governments have also provided various incremental solutions such as attacking fraud, eliminating errors, enforcing practice guidelines, and implementing electronic medical records (EMR)—but none have had substantial impact.

MENA countries have significantly higher burden of Non-Communicable Disease (NCD) particularly cardiovascular disease, and diabetes compared to global average (74%). It was reported in 2019 that CVD accounted for the maximum mortality (33%) due to NCDs globally followed by neoplasms (18%), chronic respiratory infections (~7%) and diabetes (5%). Digestive, neurological, and maternal indications also accounted for 3-4% deaths each.

Experts from the region indicated that high burden NCDs are of high priority for VBHC in KSA and UAE. In addition, diseases that have low access to innovation are also of primary focus in UAE. Moreover, diseases with high-cost therapy or expensive treatment options are key priority areas in GCC countries.

Oncology, Cardiology, and metabolic disorders such as diabetes are of high priority in Egypt, Algeria and GCC countries due to relatively higher disease burden and high cost of therapy. Rare genetic diseases are also becoming an important area in Egypt as there is pressure on the government because of media coverage.

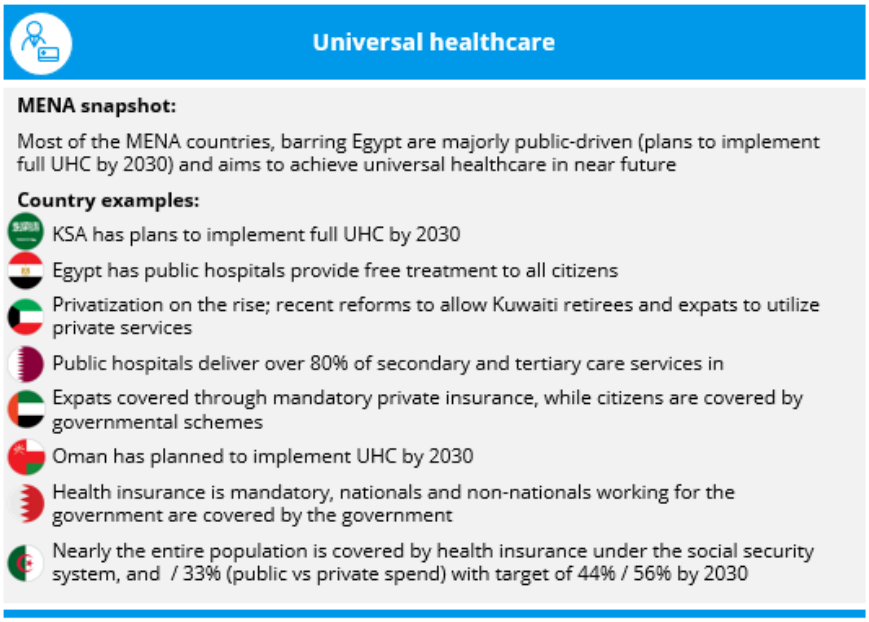
Disease burden: Global vs MENA



Source: WHO 1

Achieving and sustaining universal coverage will put pressure on government spending, further driving need for VBHC model adoption. VBHC is recognized as an instrumental part of achieving sustainable UHC – a target for the United Nations Sustainable Development Goal (SDG) to ensure healthy lives and promote well-being for all patients and at all ages. Most of the MENA countries are public-driven and plan to fully implement UHC by 2030 with an aim to achieve universal healthcare in near future. Some of the countries in the MENA region including KSA have plans for integration models for improving access to healthcare and lack of this can create inefficiencies, thereby creating burden on existing healthcare systems.

For example, KSA started implementing high quality family medicine model focused on continuity of care, provided by an interprofessional team, with a clear relationship to the patient/family. Restructuring healthcare delivery with a focus on reforming the way care is accessed, delivered, and funded, offers a significant opportunity to improve care, reduce waste/cost and improve health outcomes.



Source: US COC, Need Gap Analysis on Value based Healthcare Delivery in MENA Region

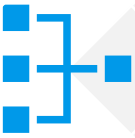
OPPORTUNITY FOR VBHC IN MENA

WHAT IS VALUE BASED CARE?

At the core, value in health is the shift from a fee-for-service model to fee-for-value reimbursement model where health outcomes of populations, communities, and individuals are assessed and prioritized relative to the resources allocated to health and care. Value-based care aims to improve the health outcomes of people while optimizing health systems to reduce health care costs. Value-based healthcare puts patients at the center of health systems, with a focus on creating healthy societies.

VBHC concept has evolved over time and its implementation status varies considerably across key components for some of the G20 countries (United States [US], United Kingdom [UK], Australia, and Singapore). These countries/institutions have implemented a best-fit model for VBHC across care types, settings, and levels as per their local needs to improve patient outcomes. A shift towards VBHC will yield significant benefits at each level of the health system in MENA.

In 2016, US Department of Health and Human Services (HHS) reported that accountable care organizations (ACO), a special organization to organize value-based payments to providers had saved $836 million and helped reduce hospital readmissions in Medicare beneficiaries from 21.5% to 17% for targeted conditions. Likewise, in the UK, an introduction to VBHC allowed health commissioners to save 2.5% of the cost towards hospital treatment[29].



Policymakers will have better data for informed decision making including resource allocation, reforms and tools to incentivize effective health promotion and prevention

Providers can continuously improve their care quality through outcome data and feedback. VBHC can incentivize providers to prioritize those interventions which bring the best outcomes for patients, including through care coordination with other providers[14]

Patients will have better information on available treatment options while being empowered to take more informed decisions on their own care needs, together with the treating physician[14]

VALUE BASED CARE IN MENA

Health systems globally have implemented VBHC differently according to the needs and features of the health systems, population needs, resource constraints, and other factors. Countries in the MENA region should consider these factors when implementing VBHC. Multiple countries in MENA have begun their transformation towards VBHC. VBHC is mainly driven by efficient decision-making and resource allocation at several levels of the health systems to effectively manage current threats, contributing to the health system transformation and sustainability. All selected MENA countries are in the process of building their capabilities and recognizing the need to adopt initiatives in VBHC. Key considerations for the development of MENA-specific, VBHC models include better understanding of ways of implementation, adjustments of policy regulations, adoption of legislation, establishment of dedicated bodies, and investments in infrastructure.

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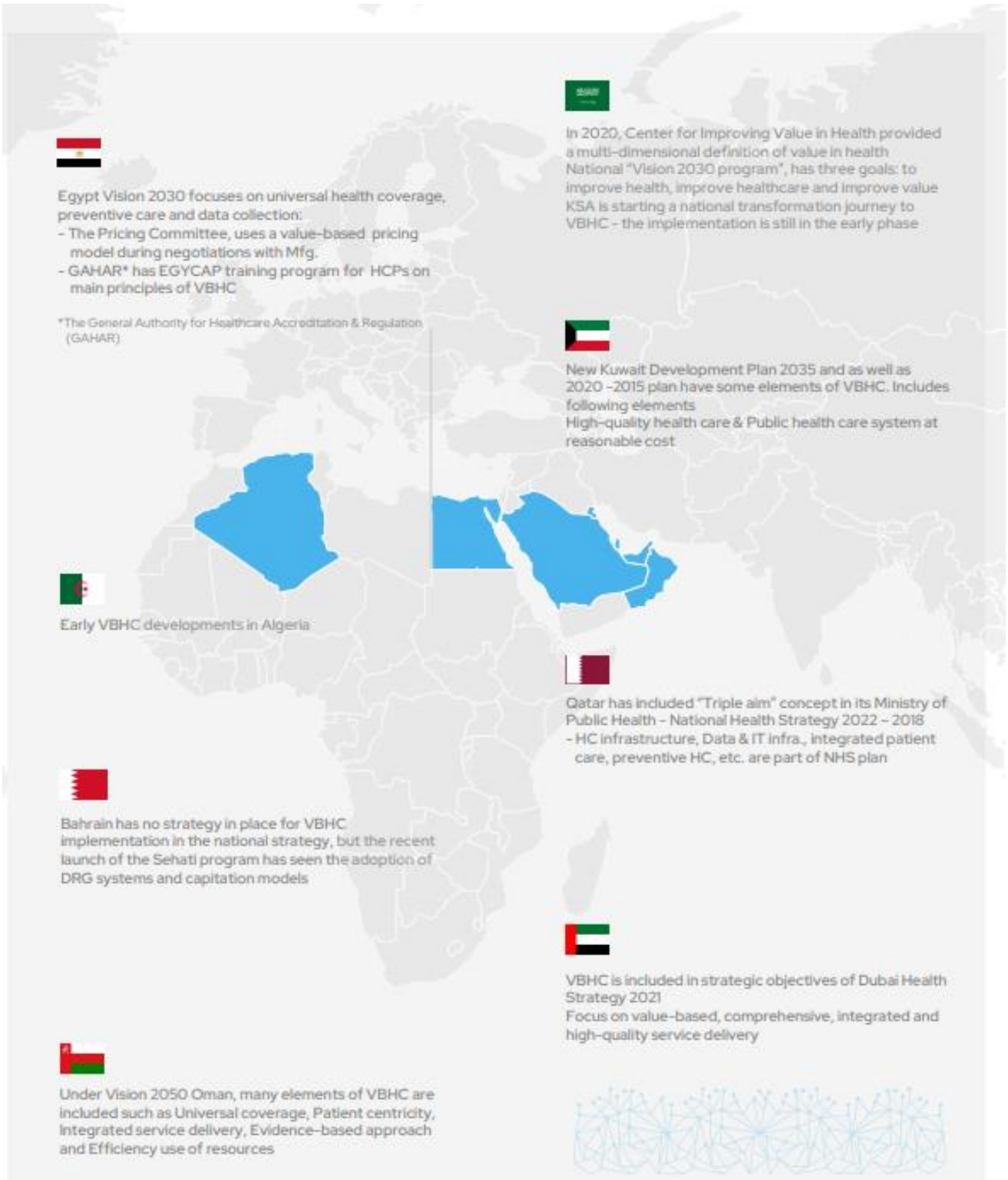
Governments interested in accelerating a shift to value-based healthcare should be prepared to account for the following key considerations for this new model:

- "Integrated patient care": A "patient-centric" healthcare approach characterized by a high degree of collaboration and communication among health professionals to establish a comprehensive treatment plan with focus on population management, care pathways and preventive health,
- "Cost and outcome measurement": Availability of tangible and measurable tools and data repositories for measurement of costs and outcomes
- "Value-based financing": A patient-centric healthcare system built to compensate manufacturers/ providers based on the patient experience in addition to health outcomes (pay-for-performance) and not volumes ("pay-for-pill")

All stakeholders (including industry) engaged in the health system need to align on common objectives through using one unified framework for defining and measuring value delivery. This can include (1) Value-based agreements (also known as innovative financing contracts or Managed Entry Agreements-MEA) via individual partnerships between pharma and a healthcare provider and/or payer based on VBHC principles) and (2) Value-based procurement (purchasing decisions based on the value or outcome of the product). Overall, there needs to be a renewed shift towards higher engagement of all stakeholders in the VBHC value chain (e.g., allowing engagement of care pathways within value-based procurements).



Source: US COC, Need Gap Analysis on Value based Healthcare Delivery in MENA Region

BARRIERS HINDERING VBHC IN MENA

The MENA region shares several barriers to VBHC adoption. Most barriers will need to be addressed at the national level.

There are several challenges in the transition to VBHC

- Reliance on traditional payment models
- Complexity in regulatory ecosystem
- Collection and maintenance of patient data
- Lack of healthcare infrastructure, awareness and understanding for proper deployment
- Gaps in operational capability
- Minimal private sector engagement and awareness
- Unpredictability of revenue stream
- Complexity of revenue risks
- High OOP expenditure
- Lack of availability of skilled and optimum workforce

Other barriers include HTA bodies and development of procedures which require professional knowledge and time, complexity associated with costs of data collection and criteria evaluation with certain diseases and treatments, like infectious diseases or diabetes treatment easy to measure while other diseases (e.g., cancer, multiple sclerosis) requiring the development of complex health economic outcome models and evaluation criteria.

System inefficiencies caused by these barriers can lead to increase in wasteful healthcare spending. Health system transformation requires policy makers to take stock of the system and employ strategies to reduce waste. Overall, reducing the provision of low value care[1] should be one of the highest priority issues for policy makers. Low value care is driven by over treatment, lack of standardization of care, poor quality of care, fragmentation of the health system, duplication of services, excessive bureaucracy, late diagnosis, and avoidance of healthcare.

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VBHC COUNTRY PROFILES FOR MENA

Algeria

Algeria has a population of 44.7. The average life expectancy was 77.14 years in 2021, a 0.24% increase from 2020. Algeria has made limited advancements towards VBHC at present. VBHC is a novel concept in Algeria and the country has seen a paradigm shift from classical model with quantitative approach (such as focus on metrics such as number of beds, number of examinations etc.) to a value-based approach starting with certain plans and initiatives.

Bahrain

Population of Bahrain as of 2021 was 1.74 million. The average life expectancy in Bahrain was 77.48 years, in 2021. Bahrain has no national strategy in place for VBHC implementation, but the recent launch of the Sehati program has seen the adoption of DRG systems and capitation models. High-level understanding the need of value-based care has started its journey with multiple reforms including healthcare financing, KPIs and monitoring.

Egypt

Egypt has a population of 100 million and an average life expectancy of 72 years for men and 76 years for women. Egypt has introduced educational programs, HTA / Pharmacoeconomics unit and unified procurement agency to facilitate VBHC journey, but long way to reach. Egypt Vision 2030 focuses on universal health coverage, preventive care and data collection. The Pricing Committee uses a value-based pricing model during negotiations with manufacturers and General Authority for Healthcare Accreditation and Regulation of Egypt (GAHAR). Additionally, GAHAR has the EGYCAP training program for HCPs on main principles of VBHC.

Kuwait

Kuwait has a population of 4.271 million with an average life expectancy of 75.49 years. New Kuwait Development Plan 2035,as well as 2015 –2020 plan, have some elements of VBHC. Notable elements include high-quality health care and a public health care system at a reasonable cost

Oman

Population of Oman as of 2021 is 5.22 million. The average life expectancy in Oman was 78.16 years in 2021. VBHC models are in early implementation stages with a strong focus on Universal Health coverage (UHC). Under Vision 2050 Oman, many elements of VBHC are included such as Universal coverage, patient centricity, integrated service delivery, evidence-based approach and efficiency use of resources

Qatar

Population of Qatar is 2.93 million. The average life Qatar was 80.45 years in 2021. Qatar has included "Triple aim" concept in its Ministry of Public Health - National Health Strategy 2018 – 2022. HC infrastructure, Data & IT infra., integrated patient care, preventive HC, etc. are part of NHS plan. Value Improvement Pilot was recently instigated to reduce procurement costs and improve financial visibility by delivering traceability, across selected specialties

Saudi Arabia

Saudi Arabia has a population of around 35.34 million in 2021 with an average life expectancy of 75.13 years. VBHC is at the heart of Saudi Arabian healthcare reform with recent programs including Health Sector Transformation program (HSTP), Incubation of Center for Improving Value in Health, National Platform for

Healthcare Information Exchange Services which will act as an enabler to implement VBHC models and Population Health management

Saudi Arabia has the National "Vision 2030 program", has three goals: to improve health, improve healthcare and improve value. Saudi Arabia has started a national transformation journey to VBHC - the implementation is still in the early phase. The Center for Improving Value in Health was created to support the transformation.

UAE

UAE has a population of 10 million, and average life expectancy of 76 years for men and 78 years for women. UAE (Emiratis of Dubai and DOH Abu Dhabi) has built a strategic vision for VBHC with a focus on value-based, comprehensive, integrated and high-quality service delivery.

Through Ejada quality initiative and academia partnerships, Abu Dhabi and Dubai have multiple initiatives supporting VBHC implementation (Ejata initiative and Standard of care, EHR and data standardization, Abu Dhabi Quality driven payments and Al Jalila foundation).

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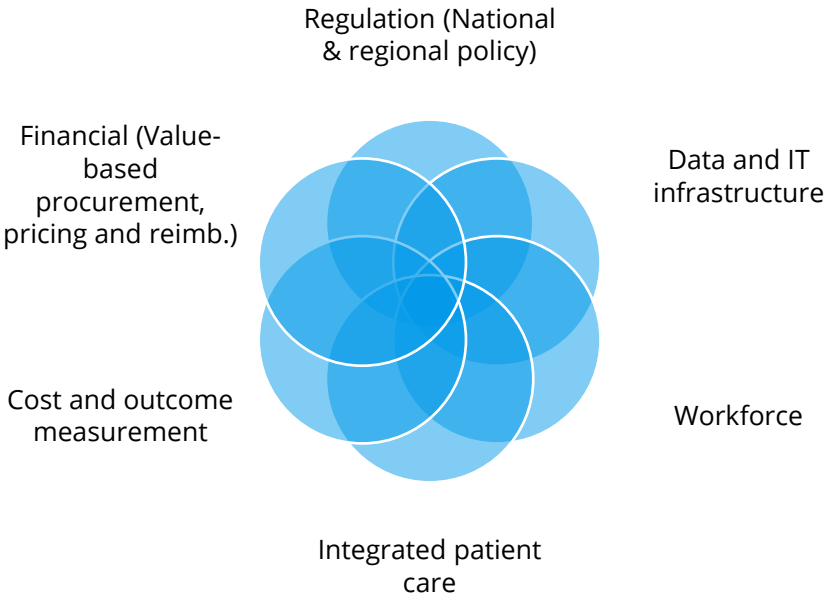
ENABLERS OF VBHC IN MENA



Financial: Rethinking financial models is one of the key enabling factors to implementing VBHC in the MENA region. Innovative payment models (RSA, capitation, bundled payments) have started to be implemented in both public and private sectors, in their early stages. These payment models are emerging slowly and there is a definite need to scale-up in order to make a deeper and more meaningful impact on VBHC implementation in the MENA region.

As compared to MENA region, countries such as USA, the Netherlands, Norway, France, Germany, and Chile have been developing and implementing value-based bundled payment models in their respective healthcare systems with an aim to reduce unnecessary cost and volume of hospital procedures. NHS England, on the other hand, has not yet widely introduced bundled payments but is working on a similar payment system known as the best practice tariffs (BPT) — a model based on rewarding providers who deliver high-quality care through predefined patient-pathways. Additionally, countries such as Nigeria and South Africa are in the preliminary

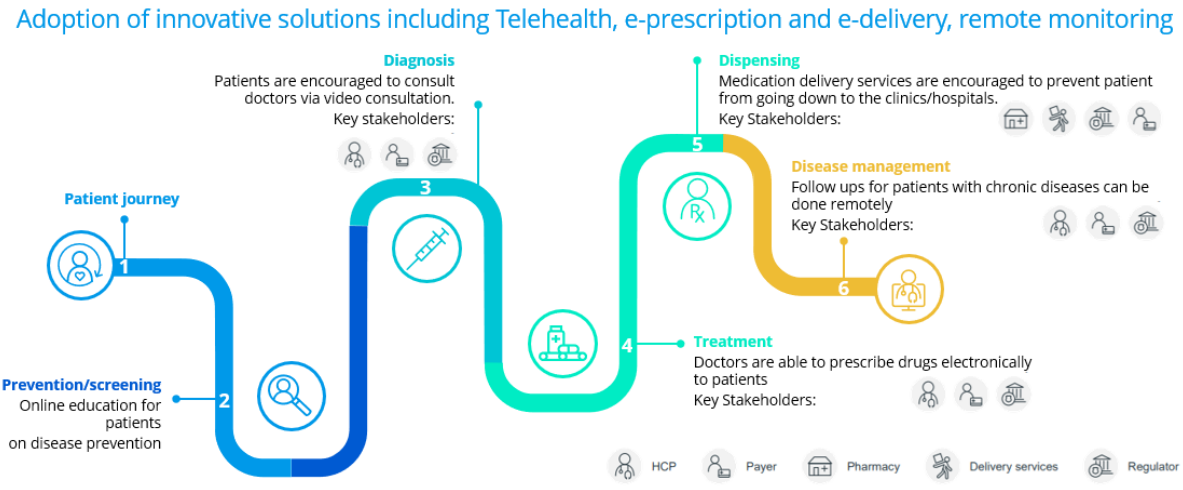
stages of adopting and implementing capitation models[32].

Data and IT Infrastructure: Digitalization is also an important enabler for VBHC. Digital health can both provide services in health and act as a source of data. Digitization and data facilitate informed decision making at all levels, through the provision of real-time and accurate data.

Looking at digital health as it related to provision of care, COVID-19 has led to acceleration of certain types of digitization across the patient journey, in several Gulf countries, enabling VBHC implementation. The acceleration of digital adoption across the health ecosystem with innovative solutions including EHR, telehealth, e-prescription and e-delivery, remote monitoring etc. to improve the access to health and also to provide the necessary infrastructure for VBHC implementation. thereby helping in coordinated care delivery and reducing the waste outcomes.

Digital systems are critical to enabling the development of person-centered integrated care delivery models aimed at achieving better patient reported outcomes and creation of greater value.

Dubai, and Abu Dhabi rates are very high as they already have implementation of EHR. DHA Guideline for Managing Health Records, Abu Dhabi Standard on healthcare Data Privacy records, Salama Initiative and Health Data Law are also in place to support digitalization.



Source: *IQVIA analysis*, ***US COC, Need Gap Analysis on Value based Healthcare Delivery in MENA Region***

Workforce: Workforce and capacity development must be a priority in VBHC implementation. In MENA specifically, workforce was identified by experts as an area of focus and need. Awareness of VBHC is in the health workforce is a critical first step. The workforce needs to be trained and developed on VBHC mechanisms to be able to adapt their skills while supporting patient involvement. The use of technology and eHealth by the health workforce is also an enabler for VBHC. Consideration should be given to the composition, size, and skillset of the workforce, while also ensuring that it is able to expand and contract according to individual country needs.

Regulation: From a policy perspective, national regulation needs to support VBHC strategy and implementation. At a high-level, there needs to be commitment from executive leadership that allows for structural reform and investment in VBHC. Top-down strategies for VBHC are an important step as well as alignment within the health systems and ministries of health. Multiple MENA countries have recognized the need for this policy shift towards VBHC, as indicated by their strategic health plans. Although an enabling policy and regulatory environment is necessary, the execution steps following the policies are most critical to implementing VBHC successfully.

Integrated Patient Care: Integrated care is a process by which care delivery is improved through coordination and planning towards a shared vision of care. A key underlying enabler for VBHC is a high degree of collaboration and communication among health professionals working together to establish a comprehensive treatment plan with focus on population management, care pathways and preventive health. Patient centricity is central to integrated patient care as well as the use of interdisciplinary teams.

Cost and outcome measurements: This enabler is closely linked to digitalization. Health systems need to have the tools to measure clinical quality indicators and cost to effectively deploy VBHC. Measuring health system performance is critical to rolling out value-based care and changing the perception of healthcare spending. Health systems should measure costs as well as outcomes for patients. This provides a more accurate view of where spending has the most significant impact on health and indicates which

interventions firmly contribute to system performance. As a result, countries can aim to deliver better value by evaluating how investments in payment model reform, digital health, health data governance, new models of care, etc., impact on performance dimensions, such as health system efficiency, equity, responsive-ness, financial protection, and im-proved population health.

While individual MENA countries have yet to adopt a clear definition of VBHC, most countries have embraced a focus on "patient-centricity", an essential step towards improved value delivery across their healthcare systems

UAE has yet to define a common definition for VBHC as currently it varies significantly across the Emirates and stakeholder type. In Egypt, Algeria and other GCC countries, currently no single definition of VHBC exists, even though the healthcare system in these respective countries has started making progress towards VBHC in recent times.

- Qatar: Implemented patient centric model of care: Accessible closer to home. In 2019, Hamad medical center launched a “Person centered care” ambassador program with an aim to enhance the delivery and improving experience by inviting support from community members
- UAE: Patient-centric home models have been present in Abu Dhabi since 2013 and more recently became prevalent in Dubai as well; with DHA including customer-centricity as one of its six values in its Health strategy plans (2016-2021). Onset of COVID-19 pandemic and the increased use of digital health has further accelerated the demand for homecare, which is expected to lead to more development
- Oman: Under Vision 2050 Oman, many elements of VBHC are included such as Universal coverage, Patient centricity, Integrated service delivery, Evidence-based approach, and Efficient use of resources.
- Saudi Arabia: “Patient-centric care” is at the heart of KSA’s e-Health strategy. In 2016, MOH launched a developmental program to promote patient-centered services, initially covering the most crowded 30 hospitals with plans to increase the number. The Center for Improving Value in Health in KSA has defined VBHC framework in a local context focusing on individual, community, and national population

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KEY CONSIDERATIONS FOR VBHC IN MENA

This report validated that all health systems are in various stages of implementing VBHC in MENA. The large majority of the MENA countries studied are already considering integrating VBHC elements into their healthcare design and delivery. Although there is a baseline for VBHC, efforts towards VBHC are largely piecemeal and not unified into a coherent strategy. The study also identified that all stakeholders identified NCDs are a key priority area for transitioning to VBHC however there remains a lack of clarity on comprehensive approach to implementation. From a structural lens, all of MENA are publicly funded health systems that are committed to UHC. Health systems in MENA are unique in that they universally cater to the population.

Policy makers should consider increasing the awareness of VBHC among all the stakeholders including providers and patients across the MENA region. An effective way to address this could be to start including VBHC principles such integrated patient care, patient centered systems to achieve best outcomes at the lowest cost etc. in the curriculum of healthcare providers that will help change their mindset.

Despite VBHC being in its early developmental and implementation phase, it has a high interest but low/varying levels of maturity and experience. Therefore, different awareness/education/implementation support is necessary depending on the maturity of the country/local system to drive any progress of VBHC in the region.

Establish an effective policy ecosystem in MENA aligning stakeholders towards the goals of achieving better outcomes. Examples of policy areas for exploration include*:*

- Increase in industry involvement and engagement,
- Creation of HTA-like bodies (national or regional) and pharmaco-economic assessment,
- Adoption of digital infrastructure and local data generation,

Test, transition, and scale innovative payment models and mechanisms. Transition to alternative payment

models such as capitation, pay for care, pay for performance, MEA, RSA, and bundled payments for procurement of innovative and expensive therapies. This approach is different from traditional bulk payment models as the value-based payment models align payments to the quality of services provided, i.e., to reward providers for high-quality patient-centric services and penalize those for inefficient and low-quality services[6]. In conjunction with payment models and mechanisms, establish a robust quality framework to classify providers' performance in four key domains. These are 1) Clinical outcomes, 2) Patient safety, 3) Patient experience and 4) Efficiency/cost reduction[6].

Develop a robust data infrastructure to enable measurement of costs and outcomes to drive continuous improvement underpinning VBHC. Data standardization, clinical coding for diagnoses and obtaining quality data for baselining and analysis are also essential to sustain VBHC in the MENA region[6]. All these approaches can ensure complete, consistent and accurate capturing/recording of patient demographic, and clinical information in order to successfully measure and compare quality of care provided and severity of health conditions across different clinics and hospitals in the MENA region[6].

Measure outcomes that matter to ensure health systems are realizing the benefits of VBHC. Measurement is highly linked to the data infrastructure ecosystem of a health system. The main success metrics to monitor and measure the success of VBHC model across the region are clinical quality indicators (i.e., quality of patient care, patient experience, value, and outcome), formulation of regulatory frameworks, access to service and care, % of population with health coverage, out-of-pocket (OOP) expenditure, government healthcare spending against % of GDP and compliance rates. These outcomes need to be transparently reported such that the system is able to adapt to ensure that the mechanisms in place are optimizing to achieve the highest value.

Clinical and health outcome indicators are the most important to measure the success of VBHC model in all countries of the MENA region. Adoption of proper regulations and/or government healthcare spending are also important KPIs (especially in KSA and UAE). Further, population health coverage and OOP expenditure are important KPIs to monitor and measure the success of

VBHC in Egypt. On the other hand, public spending level and compliance are the most important KPIs in Algeria and other GCC countries respectively.

The majority of experts agree that higher NCD burden in MENA is a regional specific issue that requires targeted efforts. Public health system with primary health care acting as a central element for other levels and services, is the imperative to achieving cost-effective health system response to NCDs. Policy makers should consider proactive primary care, improved coordination and integration across providers and creating the correct incentive systems are all levers that can be used in the MENA region.

At a regional level, efforts such as the Gulf Joint Procurement Program, which seeks to standardize the directory of pharmaceuticals, devices and medical supplies through the Gulf Health Council, need to be scaled and replicated to bolster VBHC.

Countries across the MENA region are witnessing a paradigm shift in their healthcare system. A shift towards VBHC is critically important for this transformation, with the unique opportunity to lower healthcare costs, improve the quality of care, and help people lead healthier lives. Though there are similarities across the region with respect to awareness, drivers, and barriers of VBHC, there are region-specific nuances that need to be considered while strategizing VBHC for its successful implementation.

GLOBAL INNOVATION HUB for Improving Value in Health

ACKNOWLEDGEMENTS

The Global Initiative on Health and the Economy funded this research study on readiness, challenges, and opportunities to implement VBHC in the defined MENA markets. IQVIA was commissioned with supporting the research and synthesis of the final report.

A steering committee comprising of key stakeholders from Global Business for Health Partnership, Global Innovation Hub, J&J, Medtronic, and Merck are responsible for the concept of the study.

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ANNEX – COUNTRY PROFILES

Bahrain

- Population of Bahrain as of 2021 was 1.74 million. The Average life expectancy in Bahrain was 77.48 years, in 2021
- Public healthcare in Bahrain is of a high standard, offering highly trained medical professionals and facilities. All Bahraini citizens receive free, or heavily subsidized, medical care which is broken down into primary, secondary, and tertiary care.
- Expats receive treatment at a public clinic or hospital; however, they will have to pay OOP for the cost if they do not have private health coverage. As of 2019, it is mandatory for employers to make private health insurance available to even foreign workers along with Bahraini citizens.
- The National Health Regulatory Authority (NHRA) monitors the healthcare system in Bahrain by ensuring delivery of effective, appropriate, and quality healthcare services by both public and private sector

Oman

- Population of Oman as of 2021 was 5.22 million. The Average life expectancy in Oman was 78.16 years in 2021
- The Ministry of Health (MoH) is one of the administrative systems of the Sultanate of Oman and is responsible for ensuring the availability of healthcare to the people of Oman, with emphasis on provision of universal health services, decentralization of decision making in specified technical, administrative, and financial affairs, and collaboration with international bodies, skilled medical professionals.
- The three-tiered healthcare system implemented in the Oman consists of primary care (hospitals at a local level), secondary care (care from a regional and district level), and tertiary care (any national care a citizen might receive), with emphasis being on free primary care which has increased the quality and efficiency of healthcare in Oman.

Qatar

- Population of Qatar as of 2021 was 2.93 million. The Average life Qatar was 80.45 years in 2021
- Qatar's healthcare system, although developing, is ranked in the world's top five in terms of quality of care, which provides free or partially funded public healthcare services. Supreme council of Health (SCH) oversees the healthcare provision in Qatar in conjugation with Primary Health Care Corporation (PHCC) and Hamad Medical Corporation (HMC), a non-profit organization. Qatari citizens are covered by a national health insurance scheme (SEHA), while expatriates must either receive health insurance from their employers, or in the case of the self-employed, purchase insurance.

Saudi Arabia

- KSA, comprising of majority of Arabian Peninsula, is the second largest Arab state with a population of around 35.34 million in 2021. Of these, 1/3rd are expatriates. The proportion of Saudi nationals who are less than 15 years and at least 65 years old is 30.4% and 4.1% of the total Saudi nationals respectively
- The structure of current healthcare system in KSA is divided predominantly between the Ministry of Health (MoH), semipublic and private healthcare systems. Of these entities, MoH is responsible for 60% of healthcare services, and the remaining 40% are split equally between other semipublic services and the private sector.
- The current healthcare system in KSA is being faced with numerous challenges in providing adequate and best quality healthcare to the citizens of KSA. Some of these are: 1) contracting GDP, 2) increase in healthcare expenditure, 3) rise in disease burden due to NCDs, 4) significant population growth characterized by an ageing demographic and 5) high dependency on FFS and bulk financing payment models.
- Therefore, restructuring of current healthcare system and reforming the mode of health financing are integral to a) achieve equitable and efficient healthcare services, b) introduce insurance coverage for both foreign workers and citizens and c) reduce out-of-pocket (OOP) expenditures

UAE

- In 2021, UAE had a population of 10 million, with an overall area of 77,700 square km and average life expectancy of 76 years for men and 78 years for women
- The healthcare system in UAE is a mix of mandatory health insurance model (in Abu Dhabi and Dubai, which includes special insurance schemes for government employees and nationals) and a government-funded model (in the Northern Emirates).
- MOHAP is the main body, framing regulatory policies related to development, manufacture, import, distribution and sale of pharmaceuticals. Within MOHAP, PMCD (Pharmaceutical & Medicine Control Department) is responsible for registration and pricing; These activities are supervised by the DPRHC
- Public procurement accounts for 55% of the UAE market while the remaining is procured in the private channel
- Within public, there are 3 key formularies in UAE: DHA – Dubai hospitals; SEHA – Abu Dhabi hospitals; MOHAP – mainly Northern Emirates
- DHA, SEHA & MOHAP maintain the formularies, which are developed through the recommendation of the P&T (Pharmacy and Therapeutics) committee
- Health insurance coverage is now almost universal in Abu Dhabi and Dubai, while Sharjah is moving gradually towards the imposition of broader coverage mandates. Universal coverage across the UAE remains a long-term ambition, which would require mandating coverage for both Emiratis and expatriates.
- Private insurers provide coverage to expats who are mainly treated at private hospitals, clinics

Egypt

- As of 2021, Egypt had a population of 100 million with an area of 1 million sq km and an average life expectancy of 72 years for men and 76 years for women.
- Egypt's healthcare system is pluralistic, with numerous sources of healthcare financing. Latest WHO estimates suggest that the country spends around 5% of its gross domestic product (GDP) on healthcare. Most healthcare costs are shouldered by the private sector, which accounts for

approximately 70% of total health expenditure, with the remaining 30% borne by the government.

- Insurance coverage in Egypt remains relatively limited. While national health insurance organization (HIO) coverage has expanded over the years, data published by the organization suggest that, in 2017, 58.8% of the population was covered by the scheme. However, the government has announced ambitious plans to roll out a new universal health insurance system, which will eventually cover all Egyptian citizens in each of the country's 27 governorates. Private health insurance will most likely be used to complement the basic benefit package covered by the UHI.
- In 2016, the government launched Egypt Vision 2030, with a set of strategic policies designed to drive economic growth and improve social provision, including healthcare. Key healthcare reforms outlined in the policy included the implementation of universal health insurance, development of the health IT infrastructure, improvements in the quality of healthcare service provision, and enhanced health sector governance.
- There has been consistent and gradual progress towards targeted healthcare reforms. Close scrutiny by Egypt's political leadership, coupled with external funding, will ensure that implementation efforts are maintained.

Algeria

- As of 2021, Algeria had a population of 44.7 million with an area of 2,381,741 sq km. The average life expectancy was 77.14 years in 2021, a 0.24% increase from 2020
- Algeria's healthcare system has seen significant improvements in recent decades. Public hospitals provide free treatment to all citizens and nearly the entire population is covered by health insurance via the social security system, which reimburses either 80% or 100% of the costs of outpatient care.
- The rapid growth of the system has been supported by general government spending, which, together with social security spending, accounted for almost 66% of total healthcare expenditure in 2018, according to

the latest available World Health Organization (WHO) National Health Account data.

- The government plays a central role in healthcare provision through the health ministry (Ministère de la Santé, de la Population et de la Réforme Hospitalière, MOH) and the labor ministry (Ministère du Travail, de l'Emploi et de la Sécurité Sociale - MOL). Reflecting the growing importance, the government attaches to the development of the pharmaceutical industry, 2020 saw the establishment of a dedicated new ministry (the Ministère de l'Industrie pharmaceutique, MOPI)