

# Value Based

# Healthcare



# Foreword

This PwC Thought Leadership piece is a four part series exploring Value Based Healthcare (VBH) amidst the rise in its popularity as a concept and the persistent intention and efforts to achieve it across countries globally and regionally in the GCC. The purpose of this piece is to bridge the different views in implementing VBH models by exploring a selection of the literature as well as sourcing the views of patients and health system leaders in the region and finally concluding with PwC's Point of View, de-mystifying myths and suggesting a clear way forward.

**Part 1 will introduce VBH and provide a selection of international case studies.**

## Part 1 Introduction to VBH

## Part 2 GCC Population Views

## Part 3 GCC Leaders' Perspective

## Part 4 PwC's Point of View

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# Introduction

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Globally and within the GCC, “Value Based Healthcare” has come to be one of the hottest topics and widely used terms in modern day healthcare. It’s highly unlikely that any government, healthcare strategy provider or teams on a transformation agenda mission exclude these three buzz words.

Although the words are commonly used, the question that comes to mind is is there actually a consensus or common interpretation of what “Value Based Healthcare” actually **means** or indeed how to achieve it? Can any healthcare system today claim that they have successfully “cracked the code” of both defining and measuring value for every patient and member of the population, regardless of whether they are sick or healthy?

## We will introduce the concept of value and also:

Shed light on **factors** driving systems to make the move towards value based healthcare and other common concepts that are typically associated with VBH



Showcase a selection of successful implementation of VBH across different settings internationally



Identify common themes and observations from the variously reviewed VBH models

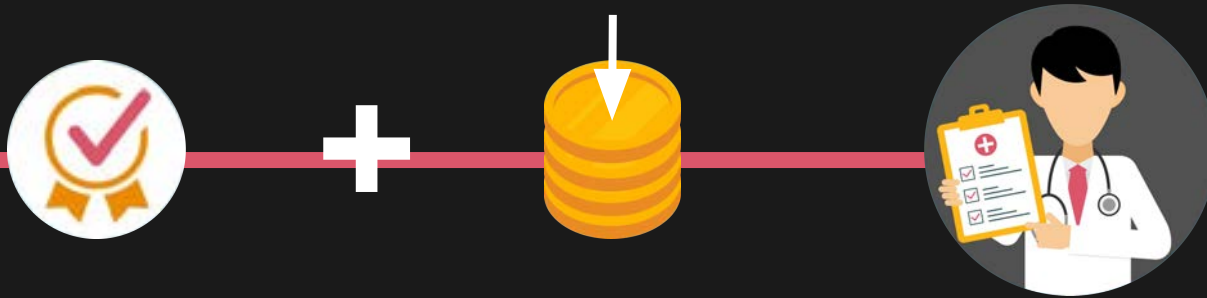


Assess the impact of the **COVID-19** pandemic on VBH



## What is “Value Based Healthcare”?

Fortunately, there seem to be a universal agreement regarding the definition of value as a concept. In 2006, Michael Porter defined value as outcomes (that matter to patients) divided by cost.<sup>1</sup> However, neither the numerator nor the denominator are new concepts. In the 1980s, Donabedian introduced outcomes as a measure of quality, while cost is one element of Kissick’s famous iron triangle (cost, access, quality) which has been central to health system management since the 1990’s. **While Porter offers a specific six component VBH model that has been adopted in a number of pilots around the world, there are other models for implementing VBH that all aim to achieve higher value.**



## What outcomes matter to patients?

An outcome is defined in two ways:

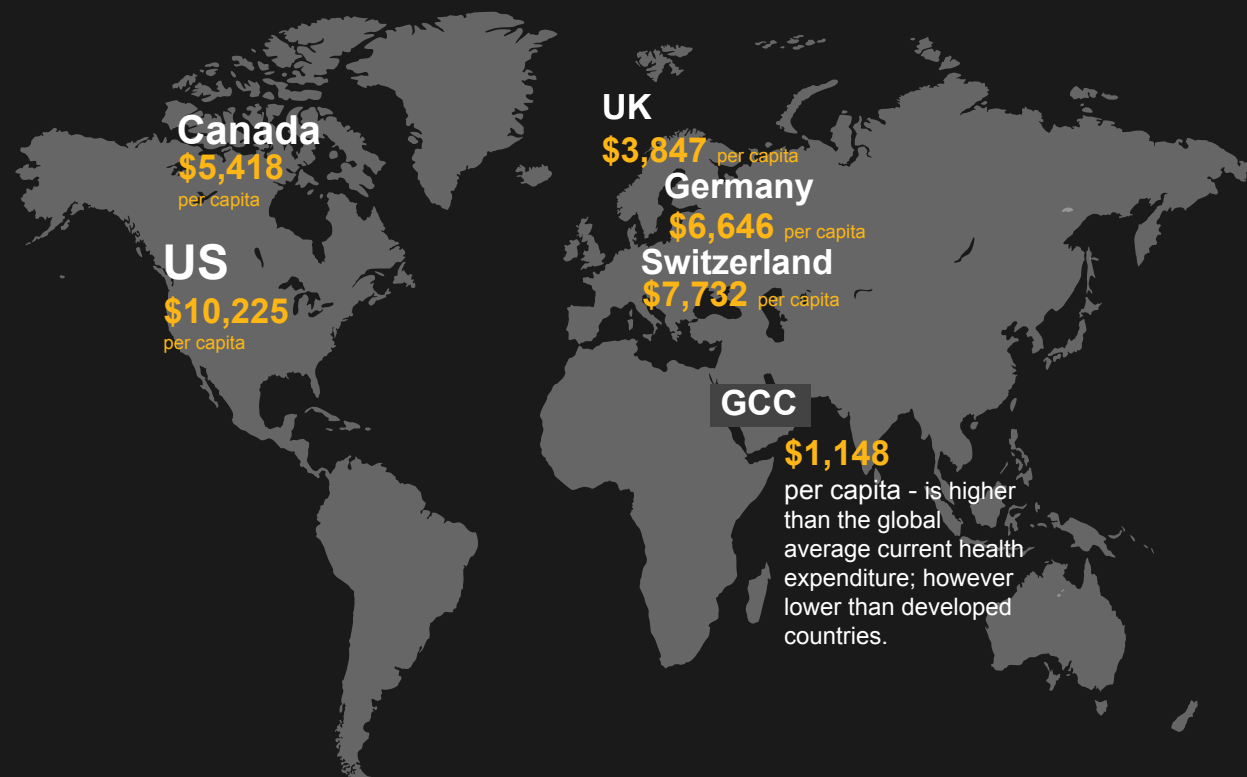


The difference between clinical and patient-reported outcomes measures (PROM) can be illustrated by a well-known example from Sweden. While data from the Swedish Cataract Registry showed that the majority of patients had indeed improved long vision following cataract surgery, patients reported lower ability to perform their previous activities which required short vision and were actually feeling worse after treatment. This is because there was no follow up with the patients or post-treatment prescription of reading glasses. **This illustrates the importance of focusing on outcomes from both a clinical and a patient-reported perspective to be able to deliver high value.<sup>2</sup>**

## How much does it cost to deliver good patient outcomes?

It is unclear and most systems around the world today still have challenges in understanding how much it exactly costs to deliver care itself, let alone being able to estimate how much it costs to deliver good outcomes. However, what we do know is that at the macro level, **health expenditure continues to rise globally with the United States being the highest.**

### Current Health Expenditure



Additionally, literature shows that there is **significant variance** in the costs for delivering the same or similar procedures across different countries or states.

A study conducted by the Health Care Cost Institute highlighted that the “price” of **C-section in California is 4.5 times higher than in Tennessee (\$20,721 vs. \$4,556).**<sup>4</sup>



This highlights a much more severe issue at the micro level, which is understanding actual costs of care (as opposed to charges or prices or expenditure) at the provider level. **While few countries such as Australia lead the world in clinical costing practices in their public system, it still does not tie costs to outcomes; and most countries around the world and the region still struggle in this area.**

## What are the drivers and themes associated with moving towards a VBH model?

Healthcare systems globally are facing key challenges and megatrends that are shaping and driving the move towards keeping populations well, enhancing the role of patients and information, and reforming the way care is accessed, delivered and funded. These include:

**Significant population growth rates** along with a demographic that is characterized with an ageing population. In the GCC, the population growth rate is expected to rise at 2.3% and 6.9% per annum between 2020 and 2025 for the young and older population respectively <sup>3</sup>. At the global level, this represents a challenge in securing sustainable and equitable access to limited resources;



**High prevalence of chronic non-communicable diseases.** In the region, Kuwait had the highest diabetes prevalence of 22%, followed by a prevalence of 18.3%, 15.5% and 15.4% for Saudi Arabia, Qatar and UAE respectively <sup>5</sup>;



**Better management of patients with chronic conditions** necessitates a shift towards population health management, disease prevention and lifestyle changes that require patient participation in their own care to achieve better outcomes;



### Value Based Healthcare

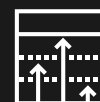
There is also a need to shift to more integrated care delivery models within and across care levels and provider settings to improve coordination of care, reduce waste/cost and improve outcomes;



With that we saw the rise of organizational restructuring efforts at the system level and a move towards Accountable Care Organisations (ACO) or Health Maintenance Organisations (HMO) type models <sup>6</sup>;



**Patients' demands** are rising for personalized experience, choice, and informed shared decision-making with their caregivers, enabled by the digital technology and information boom. <sup>7</sup>



In the GCC, exponential increase in healthcare expenditure is estimated to reach \$104.6 billion by 2022 <sup>8</sup>. Hence, funding reform is critical to change the way care is paid for to create incentives and provide cost-effective care that links to better outcomes.





## What funding models support VBH?

The concept of paying for performance or paying for quality are not new. However, more recently **there is a shift towards pay for outcomes or experimenting with Value Based Healthcare payments**. Most VBH models incorporate changes to reimbursement models to include payment for outcomes or incentives to improve outcomes. **These are typically complementary approaches to the four most known payment models** (i.e. global budgets, fee for service, activity based funding, and capitation). Examples of these new funding or purchasing models are being adopted in countries such as the United States, Germany, Australia and Scandinavia. Some of these models include <sup>9</sup>:

### New funding and purchasing models

#### Shared Savings:

This method includes incentivizing healthcare providers by giving them a proportion of the actual savings achieved compared with the expected costs, based on accomplished pre-defined outcomes.

#### Outcomes Based Funding:

Payments are based on certain outcomes achieved. This method is also known as Performance Based Funding if the performance targets for payment are outcomes-orientated.

#### Performance Incentive Funding:

Incentive or bonus payments are given to providers based on certain achieved outcomes.

#### Alliance contracting:

A joint agreement is made between a group of healthcare providers with a commissioner to deliver services under pre-agreed terms. Once the pre-defined list of outcomes of a certain service is achieved the alliance is paid for these services.





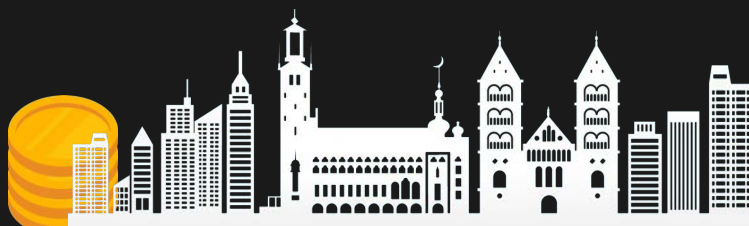


# Successful Implementation of Value-Based Healthcare

While we established that the definition of value is commonly agreed upon, **there are various frameworks and models to implement VBH across a number of care types, settings and levels** (for example state, national, patient cohort, condition).

There are a number of case studies commonly associated with VBH around the world; however, we chose to provide a select sample\* from a number of countries that showcase the variation in the implementation models and objectives.

**Sweden: Outcome based compensation system for specialised care at a National level** <sup>10,11</sup>



Sweden has been considered a global leader in VBH with a **successfully implemented outcome based compensation system across 21 regions** for some of its specialized care such as hip and knee replacement and spine surgery. Key to its success is a number of factors:

**Leveraging access to high quality data** as a key driver to facilitate implementation.

**Adoption of a pricing model where health providers are rewarded for a whole care cycle** that may last for a year or more.

**Movement towards a relationship-based model of care** as opposed to transactional “episodic” approach.

**Increasing provider accountability** by tying some of the providers’ compensation to patients’ outcomes and the expected cost for each.

**OrthoChoice** is one of the programs involving hip and knee surgery that uses a bundled (or pathway) payment system in the county of Stockholm.

Around **3.2% of the payment to the provider is tied to meeting the previously agreed outcome goals** (e.g. pain reduction, waiting time reduction).



As a result,

**complications declined**

**20%**

compared to traditional reimbursement plans

**country's total cost declined**

**17%**

per patient



## Singapore - National University Health System: Value Driven Outcome initiatives at the Regional Level<sup>12,13</sup>



The National University Health System (NUHS) is an integrated Academic Health System and Regional Health System in Singapore. The NUHS delivers Value-Driven Outcomes (VDO) by sharing data on quality and cost indicators with healthcare professionals. Through this, it has allowed healthcare providers in identifying inexpensive medical practices, which in turn helped in reduction of needless deviations and enhanced outcomes in terms of costs and quality.

VDO used patient reported outcome measures (PROM) such as patient satisfaction rate and the speed returning to normal or improved function post discharge from hospital. VDO also includes quality measures, specific to each medical condition, such as promptness of administration of antibiotics, and speed of recovery post-surgery, which are then tracked throughout the patient's journey.



As a result of implementing VDO, in the case of total knee replacements, the number of patients requiring blood transfusion, reduced from

from **26%**

to **3%**

which resulted in an overall savings of **955\$ per case.**



## United Kingdom - NHS Rightcare: Working with Clinical Commissioning Groups to improve healthcare outcomes<sup>14,15,16,17</sup>



NHS RightCare originated as a part of the Quality, Innovation, Productivity and Prevention (QIPP) program within the Department of Health in the United Kingdom. **NHS developed data packs, across a range of conditions e.g. cardiovascular disease, respiratory, and others which provide patient information to health systems, helping them identify potential improvements.**

For instance, Aneurin Bevan University Health Board (ABUHB) in South East Wales had spent **£16** million on Asthma and Chronic Obstructive Pulmonary Disease (COPD) inhaled therapy in 2014/15. This prescribing was not in line with the guidelines which led to unexplained high costs in addition to admission/procedure rates for COPD and Asthma were higher compared to other regions.

ABHUB began **developing patient-centric plans and implemented a programme that allowed the standardised measurement of patient-reported outcome measures (PROMs).**

As a result,

reduce prescribing costs by

**£1.3 million**



## Germany - Martini Klinik: Incentivising outcomes and team unity for prostate cancer patients <sup>18,19</sup>



Martini Klinik (MK), part of University Hospital Hamburg-Eppendorf (UKE), is the world's largest centre for prostate cancer with over 5,000 outpatients cases and 2,400 surgical cases seen every year. **Through its focus on exclusively prostate cancer cases, MK succeeded in creating a successful value based culture.**

Elements of this VBH culture include physicians training, specialisation and exchange of knowledge whereby physicians from different levels meet on a regular basis to exchange knowledge and advice on complex cases. In addition, survey based scorecards that measure health outcomes are completed by patients and shared with physicians to allow them to discuss and compare with those of their peers'.

MK's VBH model also **implements a unique compensation system that incentivises both outcomes and team unity.** Employees' salaries and quality and outcomes based-bonus compensation are distributed equally among the staff. Compared with the German healthcare outcomes averages at the National level, results showed:

Severe incontinence  
rates in patients are  
**11** times lower



Full continence is  
**45%** higher



Erectile dysfunction is  
**55%** lower



Complication rates are  
**15** times lower for  
ureteral injury and **62**  
times lower for sepsis

## India - Narayana Health: Utilizing lean methodologies to optimize operations and value for patients as at the provider level <sup>20</sup>



Narayana Health is one of India's largest healthcare providers and includes multi-specialty hospitals and primary care facilities. Narayana Health leverages lean and reengineering techniques and alternative methods of care delivery such as telemedicine to optimize care for its cardiology patients. It used assembly line concepts for surgeries, to reduce the length of stay and re-engineered the design, material and use of equipment. The **production line approach allowed for many surgeries to be performed in a row by limiting the work of surgeons to only performing the task they are specifically qualified to do while other staff do the administrative and preparatory tasks.**

**This enabled surgeons in India to perform more than double the procedures each year - 400-600 in comparison with 100-200 in the US. Their approach led to reducing their costs as well as achieve other positive outcomes including:**

Average cost of open heart  
surgery is **\$2,000 compared to  
100,000\$ in the US**

**50X more than the US**

**1.4%** mortality rate within **30  
days** of coronary artery  
bypass graft surgery,  
compared with **1.9% in the U.S**

**1%** mortality rate for mitral  
valve replacement, and a  
door-to-balloon time of **less  
than 90 minutes** for 91 percent  
of cases; both rates exceed  
international benchmarks

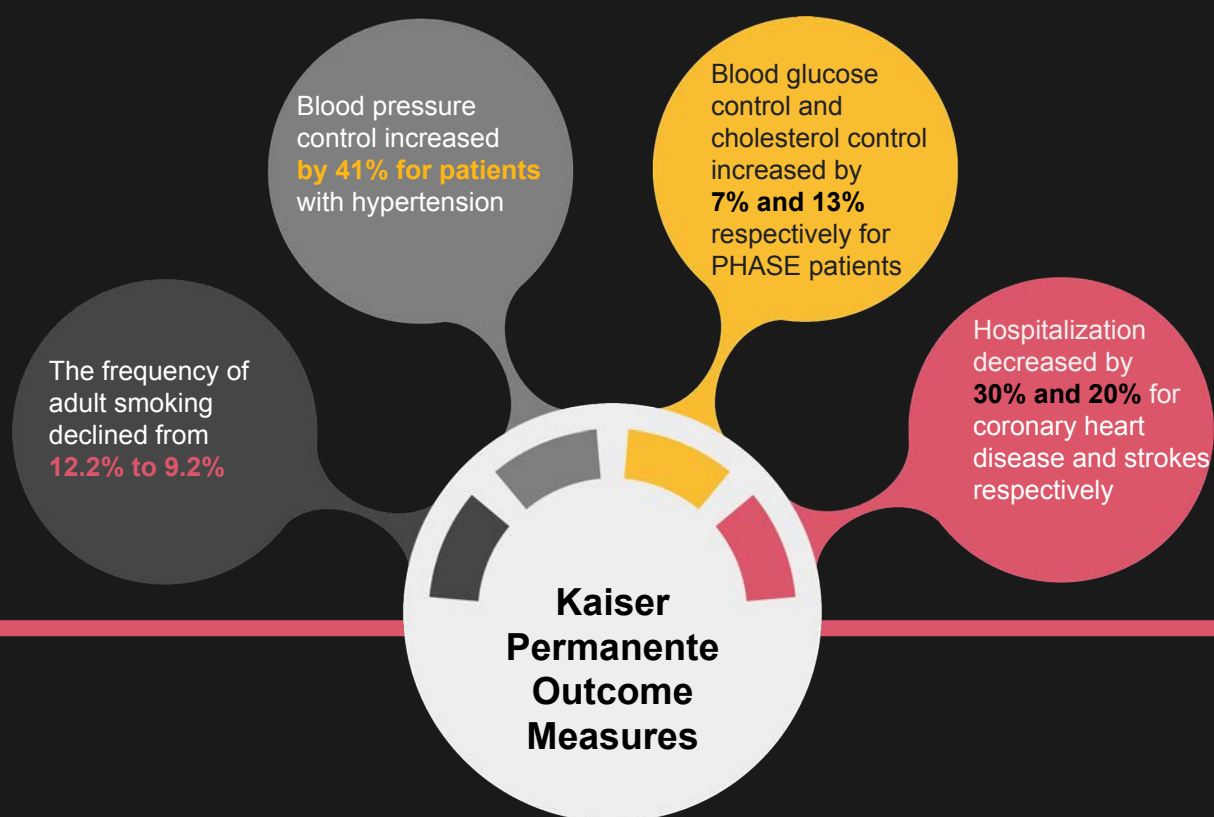
## Kaiser Permanente: Leveraging prevention interventions to improve outcomes in patients with risk of cardiovascular disease: <sup>21</sup>

# 2



Kaiser Permanente (KP) is one of America's leading healthcare providers with a non-profit delivery system. KP is known to be a **leader in the implementation of Value Based Healthcare serving members in eight regions across the US.**

KP's approach uses "in reach" and "outreach" efforts to strengthen the interaction between the patient and caregivers to achieve the desired outcomes. An example is a program introduced in 2004 in the Northern California region called Prevent Heart Attacks and Strokes Everyday (PHASE). The program uses various interventions include drugs prescriptions, whenever appropriate, and promoting four lifestyle changes including tobacco cessation and physical activity, in order to provide inhibition treatments for controlling blood pressure, lipids, and glucose among patients at risk for cardiovascular disease across primary, secondary and tertiary levels.



# Key observations from the implementation of Value Based Healthcare models

There are common themes across the various implementations of VBH from around the world as well as common challenges. The common goal is enhancing value by improving outcomes and reducing costs. The approach differs. The below key observations across both international and regional healthcare systems are based on literature as well as PwC's experience:



**Scope of implementation:** Identifying the appropriate scope of the implementation is one of the main challenges faced when implementing VBH models. As seen above, each of the case studies had a limited scope based on type of care, patient cohort or a condition and implemented at a different level (provider, state, national). **How do you define the scope and where to begin?**



**Quality vs outcomes:** While quality measures matured over time and a number of countries created programs to tie pay to quality; outcome measures are still not quite there. The two also continue to be at times confused as there are variations in defining and measuring outcomes. Most implementations rely on defining specific to the condition their programs are targeting in addition to PROMs. **How do you create standardized and comprehensive outcome measures? And how do you engage with patients to collect information on what outcomes matter to them?**



**Cost vs spend:** Many of the researched case studies include limited information about impact on cost of delivery or include impact on spend on these patients groups (meaning what was paid to treat them as opposed to what it cost to treat them). Understanding costs at the patient level remains a challenge globally and in the region. **How do you develop capabilities in clinical costing? How do you ensure that your practices meet your objectives and best practice standards as opposed to "fit-the-vendor-solution"?**



**Data Infrastructure:** Implementing a VBH model relies on a robust data infrastructure, enabled by the necessary digital and information technology. It is critically dependent on a number of data-driven insights on cost, quality, utilization, patient behaviors and outcomes. This challenge is particularly relevant to some of the countries in the GCC that are amidst their transformation. **Does this mean that you have to wait for all "the bells and whistles" to start your VBH journey? Or can you leverage simple tools to collect the data that you need?**



**Leadership and resources <sup>22</sup>:** Implementing VBH requires commitment from leadership and investment in resources. In 2019, a healthcare survey in the US tackled several aspects of implementing Value Based Healthcare healthcare. A quarter of the votes in the survey highlighted that healthcare providers faced challenges in shortage of staff and insufficient IT infrastructure. **How do you really the leadership's buy in and staff's support?**



**Clinician behavior:** In systems that are still either budget or fee for service driven such as the US, clinicians fear VBH. In the US, a survey showed that 61% believed that Value Based Healthcare care will negatively impact their practice, and 63% feared their earnings will be affected due to the shift from FFS <sup>23</sup>. VBH not only has the potential to impact physician pay (if tied to performance) but also requires significant changes to status quo and how care is delivered; meaning it requires adapting to new behaviors which is the most challenging to sustain. **How do you bring your clinicians along the VBH journey and combat clinician resistance?**





# The impact of COVID-19 on Value-Based Healthcare

During the COVID-19 pandemic, healthcare systems have witnessed a major disruption to elective and chronic care services leading to a setback in the continuity of care for millions of patients worldwide. **In a WHO survey, 82 out of the 155 countries surveyed reported disruption in their hypertension treatment services and 78 countries reported the same for diabetes treatment (more than 50% for both chronic conditions).** <sup>24</sup>

The management of the pandemic has also put a huge strain on healthcare systems to “flatten the curve” and preserve human and physical capacity within the healthcare systems to treat those most severely affected by the disease.

On a more positive side, **COVID-19 had an impact on how patients perceive value in healthcare as well as providers' behaviours.** Due to limited physical accessibility to facilities, **patients became more accustomed to a virtual delivery model.** What matters to patients is the personalised interaction with their provider and the ability to manage their conditions - the physical place mattered less.



On the provider side, **physicians are also reporting a better experience due to less distractions and the sole focus on the patient and their needs.** “When we're not distracted by the distractions of the traditional system, I can mainly take care of my patient panel - I'm responding to every phone call, every email, and every text message” said Thomas Lee, MD primary care physician at Brigham & Women's Hospital in Boston and the Chief Medical Officer for Press Ganey. <sup>25</sup>



COVID-19 has forced healthcare systems to adapt to new ways of care delivery and resulted in wide acceptance of emerging technologies and successful implementation of virtual and digitally-enabled care practices.

Therefore, **in the long run, COVID-19 will accelerate the adoption of Value Based Healthcare care models** due to the identified need to focus efforts on activating patients and facilitating management of chronic, elective and noncommunicable disease cases. <sup>26</sup>

It has shed light on what really matters to patients in times of need. It **eliminated the overuse and abuse of unnecessary services that put pressure both on patients as well as healthcare systems and focused health resources on what matters most.**



**This concludes Part 1 of this thought leadership piece. Part 2 will explore the perspective of the GCC population on the value of healthcare services.**

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