HealthcareTransformers

Roche

9 real-world examples

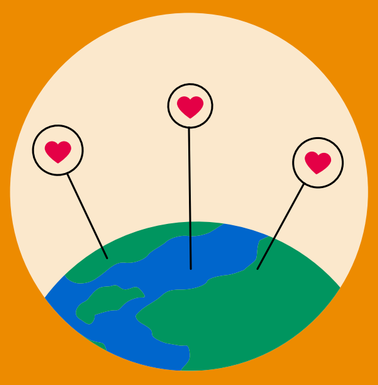
of value-based healthcare transforming care delivery

Insights for healthcare executives

What we aim to

answer

What are the benefits of value-based healthcare (VBHC)?



Does VBHC work in the real world?

What are some successful examples of VBHC initiatives?

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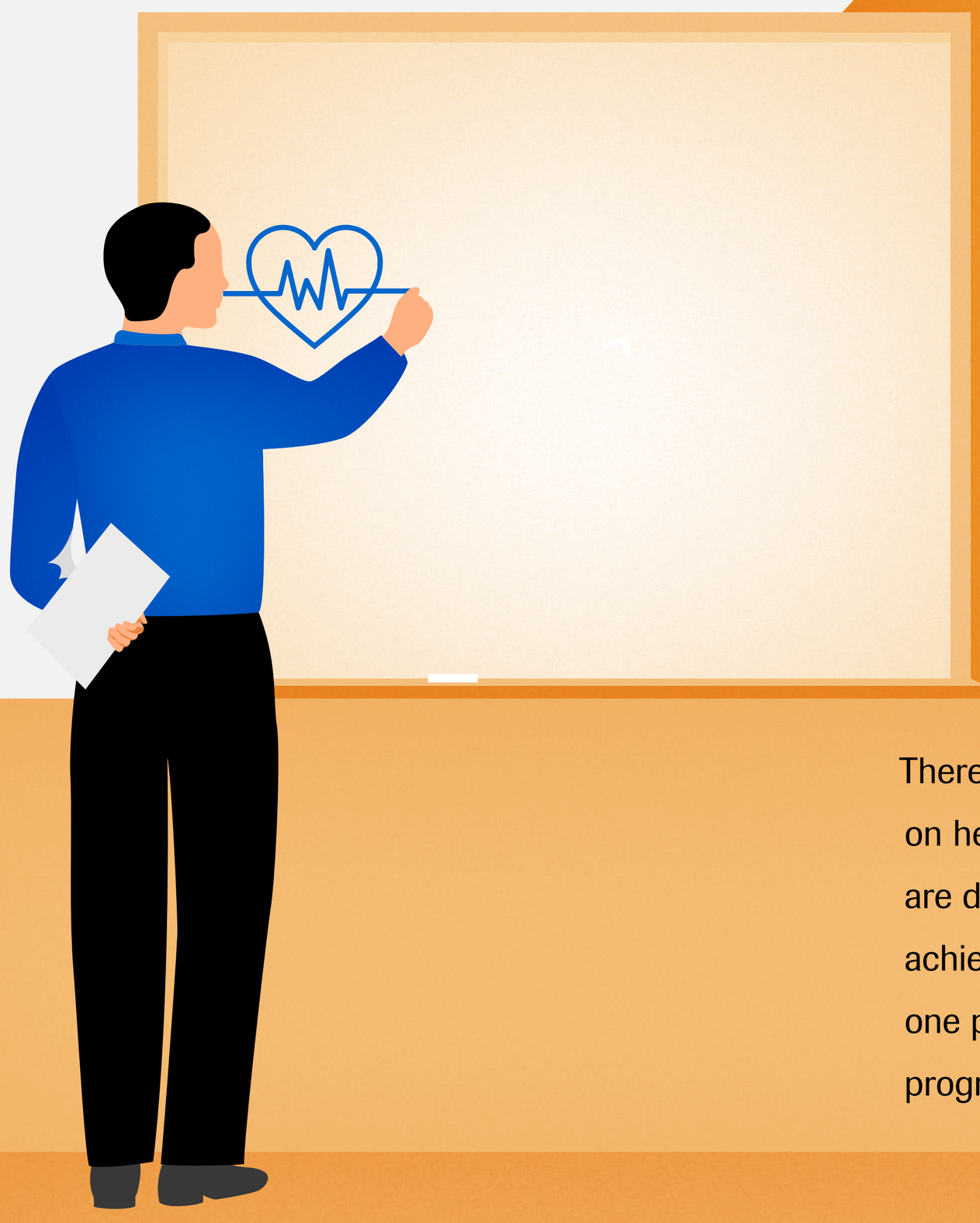
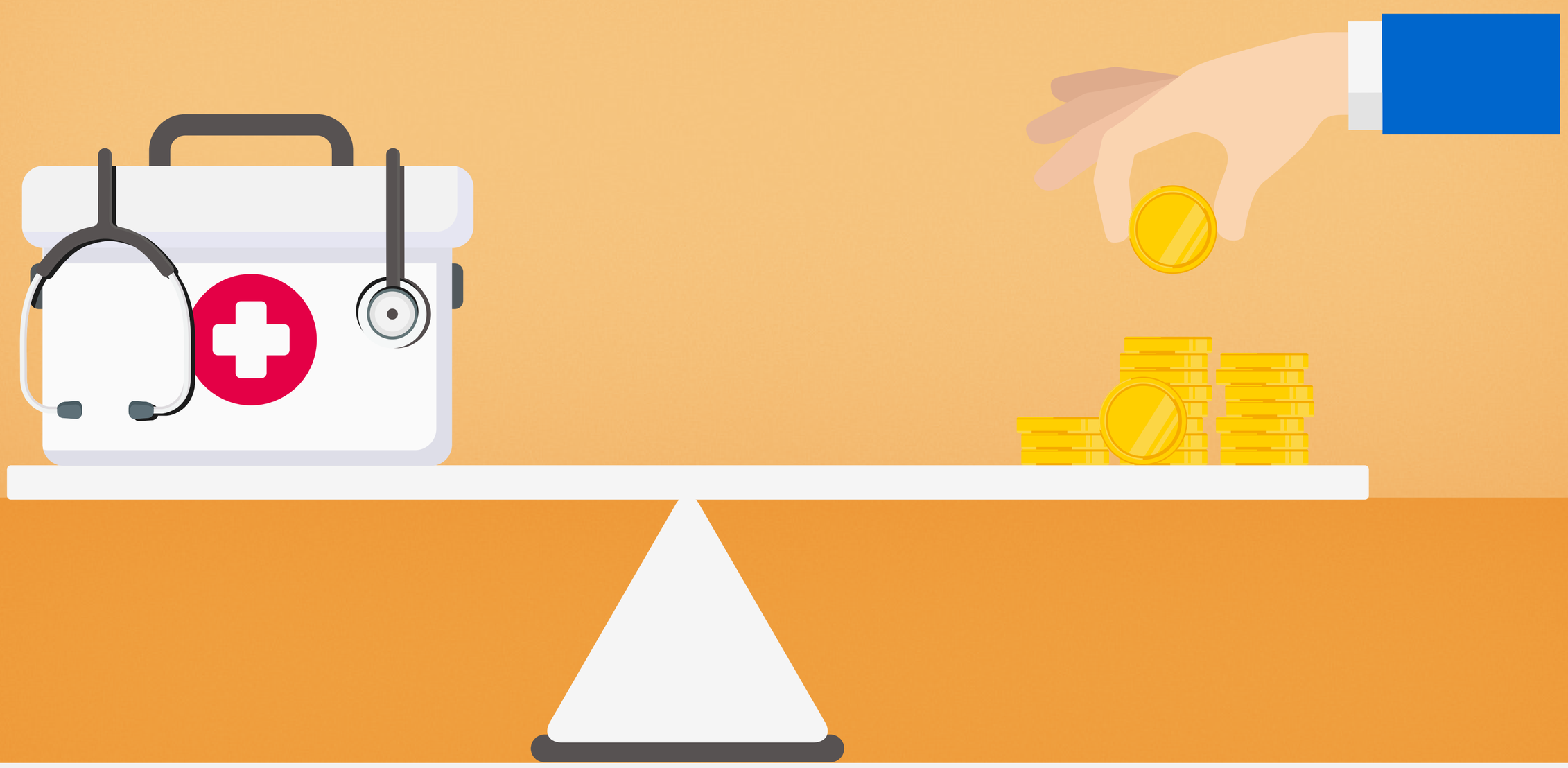


There are several pressures that are weighing heavily on healthcare systems today. Together, these are driving costs upward while not necessarily achieving expected patient outcomes. As a result, one potential severe risk is that the remarkable progress in global health will become unsustainable.



These sources of unsustainability in our healthcare systems include:

Cost

Healthcare expenditure is growing at more than twice the rate of GDP in higher income countries. According to the World Bank, the compound annual growth rate in health expenditures for Organization for Economic Co-operation and Development (OECD) countries was 2.7% between 2015 and 2019,[1] while growth rate in GDP per capita declined by 5%.[2] One contributing factor is that aging populations have increased healthcare needs.[3]

Expenditure – Outcome

What a country spends on healthcare doesn't necessarily mean a healthier population. The data does not demonstrate a strong correlation between health expenditure and health outcomes. In fact, the five OECD countries with the highest healthcare spend are spread across the top 30 in life expectancy.[4]

Variation in outcome

There continues to be significant variation in healthcare outcomes between and within countries; for example, in the US, patients in the poorest performing hospitals are 13 times more likely to experience complications versus the best-performing hospitals.[5]

Persistence of low-value care

Despite decades of attempts to reduce it, health services that bring little actual value endure, especially in certain geographies and for certain procedures. These services, such as prostate-specific antigen testing in men older than 70 and the use of antipsychotic medications in patients with dementia, merely create health and cost burdens for health systems.[6]

Value-based healthcare aims to improve outcomes and optimize resources

The Value equation for VBHC

Outcomes
that matter to patients

=

Cost
across full cycle of care

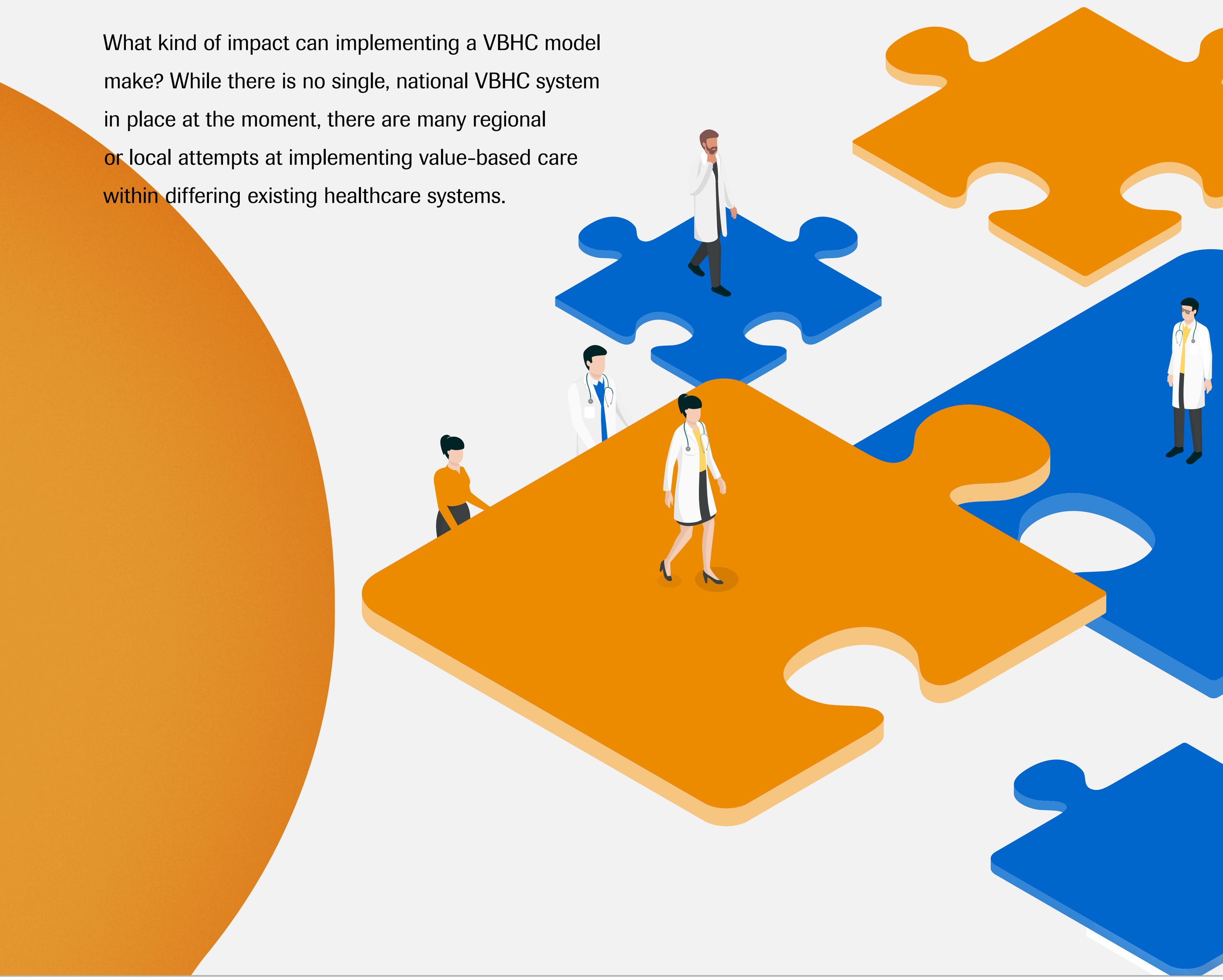
In recent years, there has been a movement towards value-based healthcare (VBHC) as a potential response to these challenges. VBHC is a patient-centered approach to healthcare delivery focused on improving the health outcomes that matter most to patients across the entire cycle of care. At the same time, VBHC optimizes the use of healthcare resources and cost to society. It does so through a shift in the reward system, incentivizing improvements in value rather than volume through alternative payment models.

Under a VBHC system, the goal of healthcare would shift from treating a condition to solving a patient's needs. Payments would then be based on positive patient outcomes rather than on the quantity of procedures performed.

While fee-for-service models set prices for services rendered regardless of the outcome, VBHC is a patient-centered approach to healthcare delivery focused on improving the health outcomes that matter most to patients across the entire cycle of care, while concurrently optimizing use of healthcare resources and cost to society. It is a movement away from asking patients, "What is a matter with you?" to "What matters to you".

VBHC requires a **strategic framework**

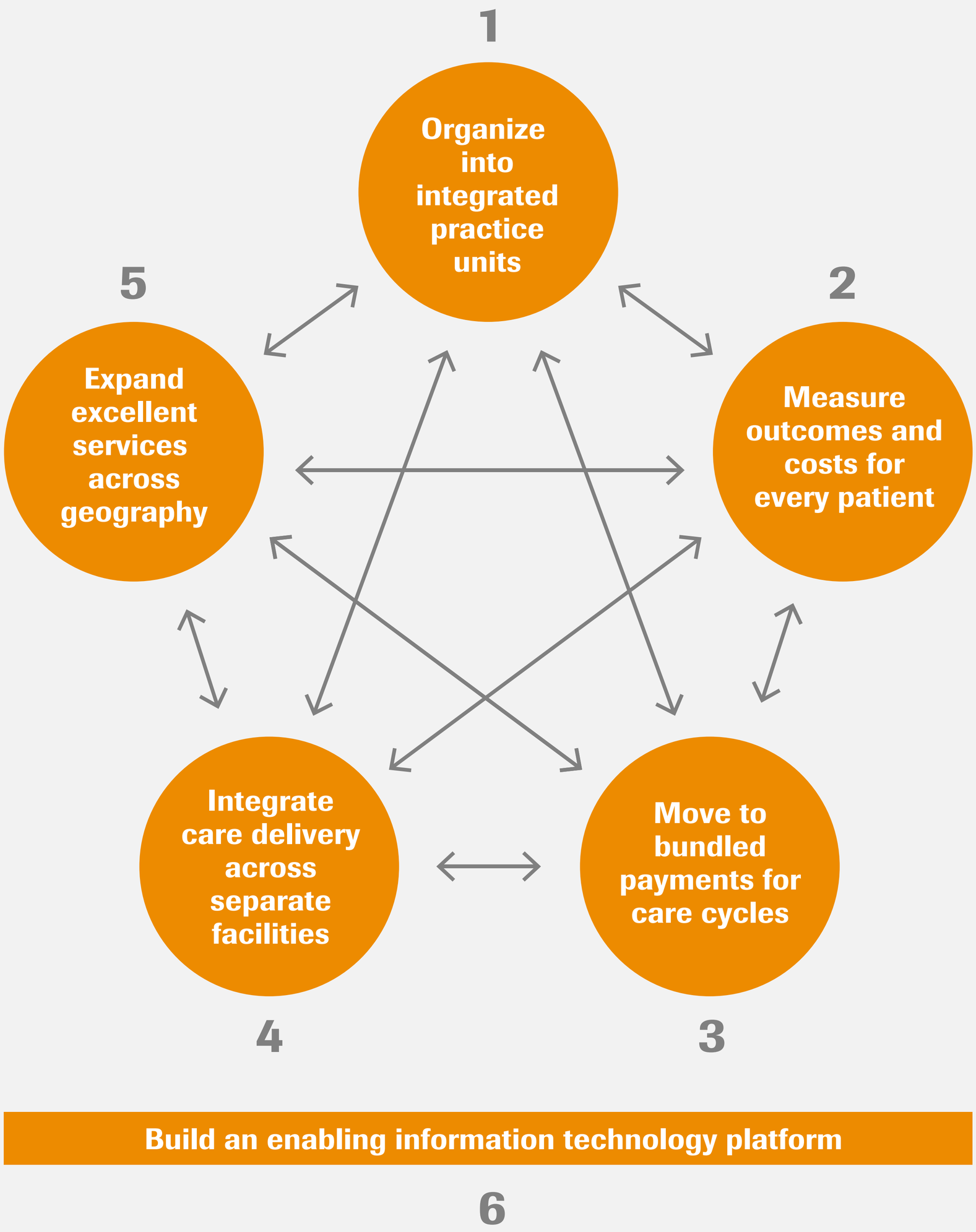
What kind of impact can implementing a VBHC model make? While there is no single, national VBHC system in place at the moment, there are many regional or local attempts at implementing value-based care within differing existing healthcare systems.



A STRATEGIC FRAMEWORK FOR VBHC IMPLEMENTATION

There are barriers to successfully implementing VBHC: shifting from fee-for-service to VBHC funding models, defining and creating standardized outcome measures, need for robust data and IT infrastructure, understanding costs throughout patient journey, policies and a legal framework that supports VBHC.

The 6 elements to implementing VBHC



In their seminal work on VBHC, Michael Porter and Elizabeth Teisberg developed a strategic, six-step framework for the implementation of VBHC called “The Value Agenda” that addresses these challenges directly.[7]

This framework outlines the fundamentals that need to be put in place in order to successfully execute VBHC on any level. To learn more about these principles and how to prepare for and successfully implement VBHC, please download our ebook here.

VBHC brings value for all HC system stakeholders

Patients

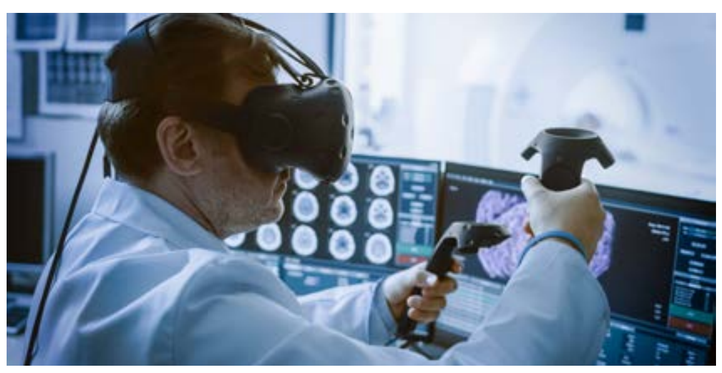
Improvements in health outcomes that matter to them as well as lower costs. Avoid therapies unlikely to benefit them, care from physicians and teams with more patient-centric management strategies.

Providers

More standardized and relevant evidence to guide treatment choices, organized care around patients, higher patient satisfaction & greater efficiencies.

Payers

Improved "value for money" as patient-relevant outcomes and savings are delivered due to more effective use of resources, avoiding low-value care.



Industry

Rewarded for solutions that improve outcomes. Opportunity to differentiate from competitors as a partner for the healthcare ecosystem, drive synergies with other business models* and become more patient-centric.

In the end, implementing VBHC must be based on the value that it brings to all stakeholders involved.

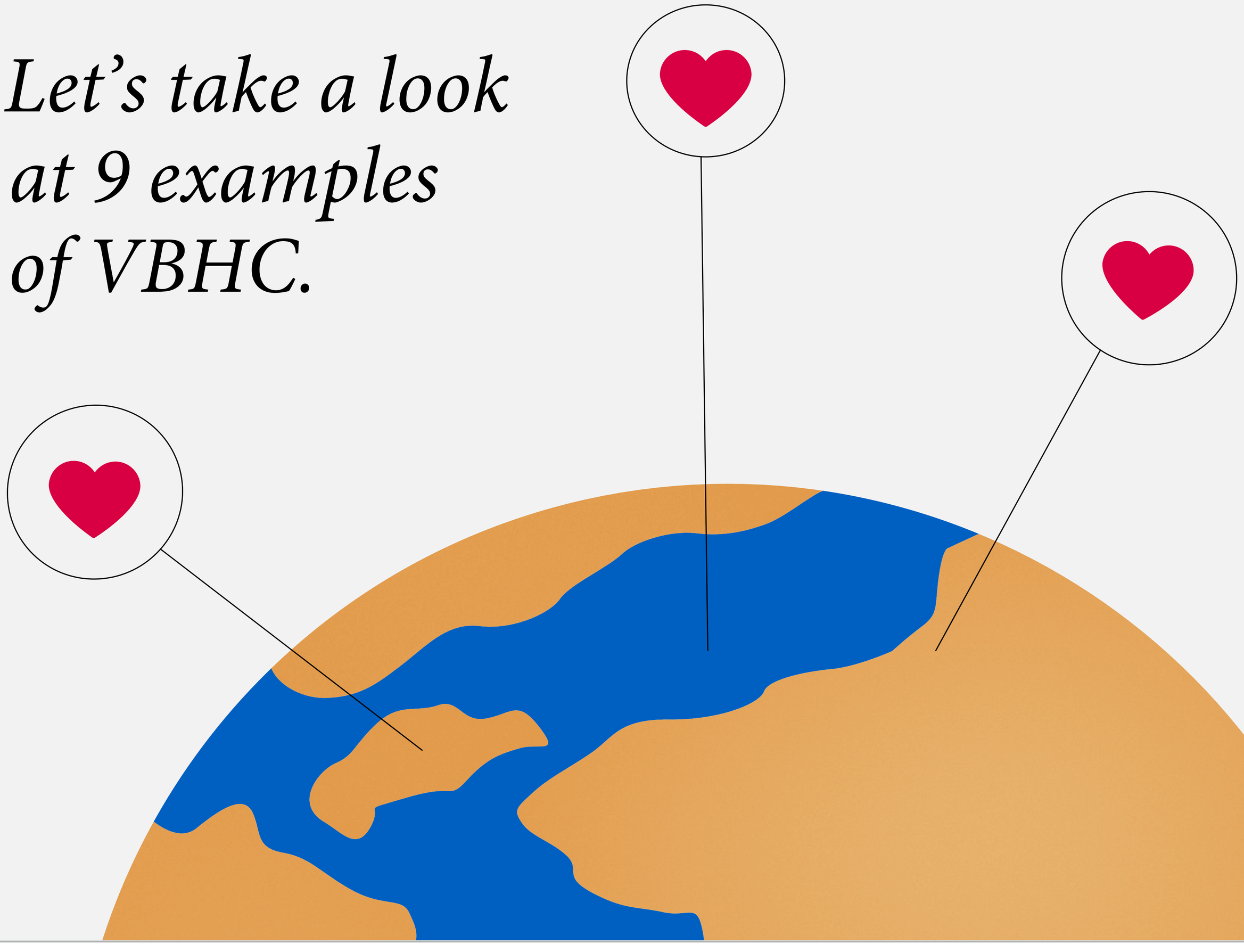
It is important that we don’t mistake the implementation of VBHC with simple cost reduction or quality improvements that rest solely on clinical outcomes.

While these are all important factors, they are not the same as “value” in terms of focusing primarily on improving patient health outcomes throughout the entire patient journey. The ultimate goal of any VBHC system is – and must be – focused on improving patient health.

Examples of successful VBHC initiatives

from around the world

Let's take a look at 9 examples of VBHC.



EXAMPLE 1

Netherlands: Heart Network

What is it: To deal with the growing incidence of cardiovascular disease due to a rapidly aging population in the Netherlands, the Netherlands Heart Network (NHN) was established. Its aim is to become the first successful integrated care delivery system targeting patient-relevant outcomes for cardiac patients.

The NHN is a joint effort made up of healthcare providers in primary, secondary, and tertiary care including cardiologists, general practitioners, nurses, ambulance service, thrombosis service, home care organizations, pharmacists, and diagnostic centers. Members work together to continuously improve outcomes by organizing the total care delivery value chain.

The standards of care are developed including patient relevant outcome measures, a process of care, protocols for the specific heart condition and process measures across all involved stakeholders. This helps to optimize the healthcare process with a focus on improving patient-relevant outcomes.

In addition, healthcare costs are saved by eliminating duplication of procedures and tuning transmission of activities between primary, secondary, and tertiary care.

Outcomes

- Lower absolute numbers of hospitalizations, cardiovascular accidents, major bleedings, serious adverse effects and mortality rates for atrial fibrillation compared to prior studies
- Equal or above average guideline implementation of quality indicators such as outcome, process, and structural measures

Lessons Learned

The NHN's success shows the importance of improving the quality of care across the full patient journey, from family doctor all the way through to specialist treatment. By introducing standardized screening tools for primary care physicians, for example, the program has helped to ensure that atrial fibrillation patients were referred through the best care pathways and sent to a hospital if needed.

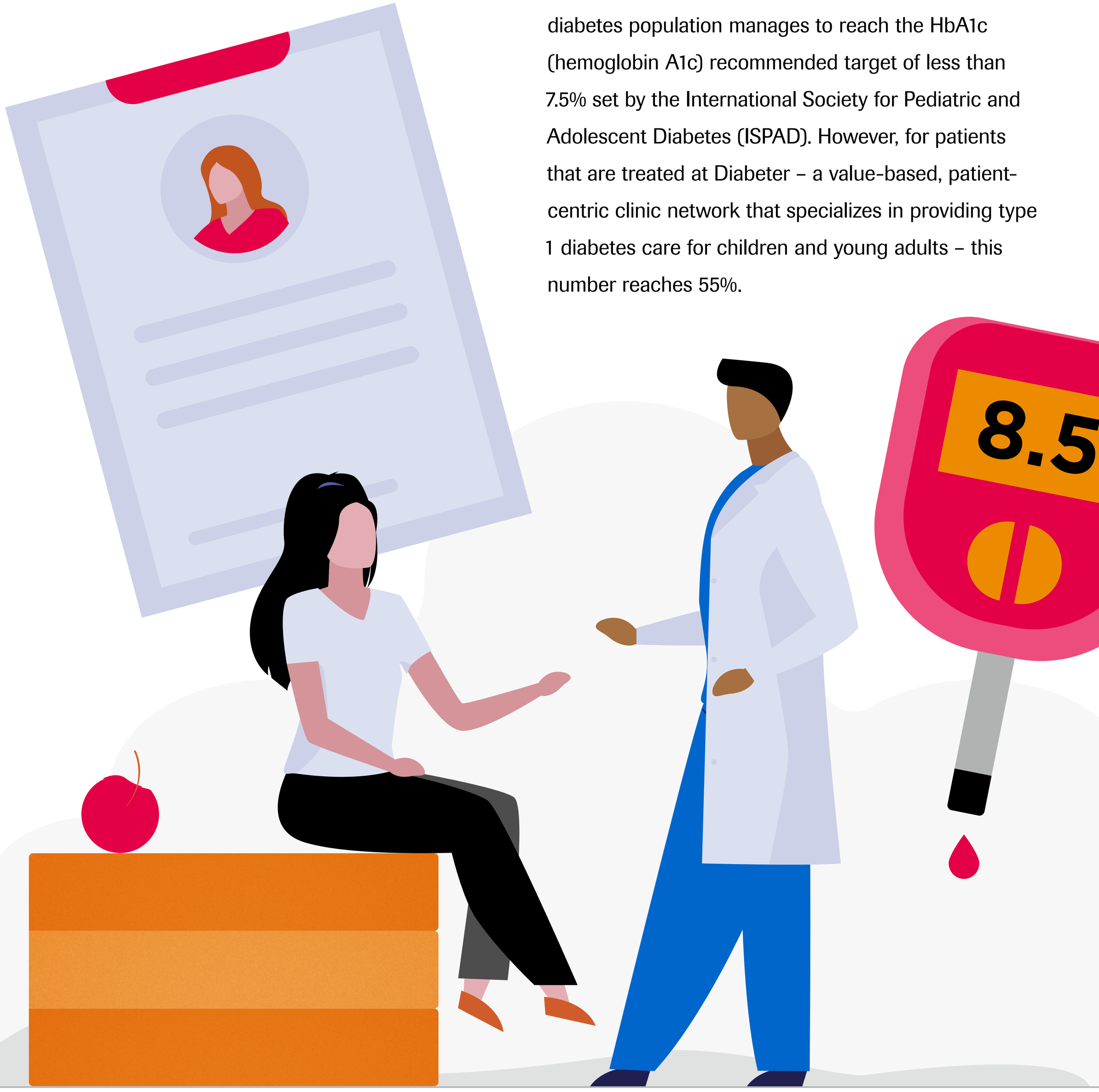
By creating this structured approach and alignment among providers, improved patient outcomes and reduced costs have become possible. Creating these standards and alignment is a critical step toward achieving the goals of VBHC.

*Please refer to reference 8 for all information in this section unless otherwise specified.

EXAMPLE 2

Netherlands: Diabeter diabetes clinic

What is it: Less than 30% of the pediatric type 1 diabetes population manages to reach the HbA1c (hemoglobin A1c) recommended target of less than 7.5% set by the International Society for Pediatric and Adolescent Diabetes (ISPAD). However, for patients that are treated at Diabeter – a value-based, patient-centric clinic network that specializes in providing type 1 diabetes care for children and young adults – this number reaches 55%.



Outcomes

- Lower hospitalization rate of patients compared to other Dutch pediatric clinics
- Superior outcomes led to a decrease of direct annual costs (8.6%) to type 1 diabetes patients

Lessons Learned

For patients facing chronic medical conditions like diabetes, traditional care models that are fragmented and disconnected can limit access to optimal care. Diabeter's unique care model, on the other hand, has driven outstanding outcomes without increasing costs.

Their combination of innovative technologies, patient-centric care delivery, and reimbursement based on outcomes has demonstrated that the tables can be turned and the impact on patient's lives can be improved.

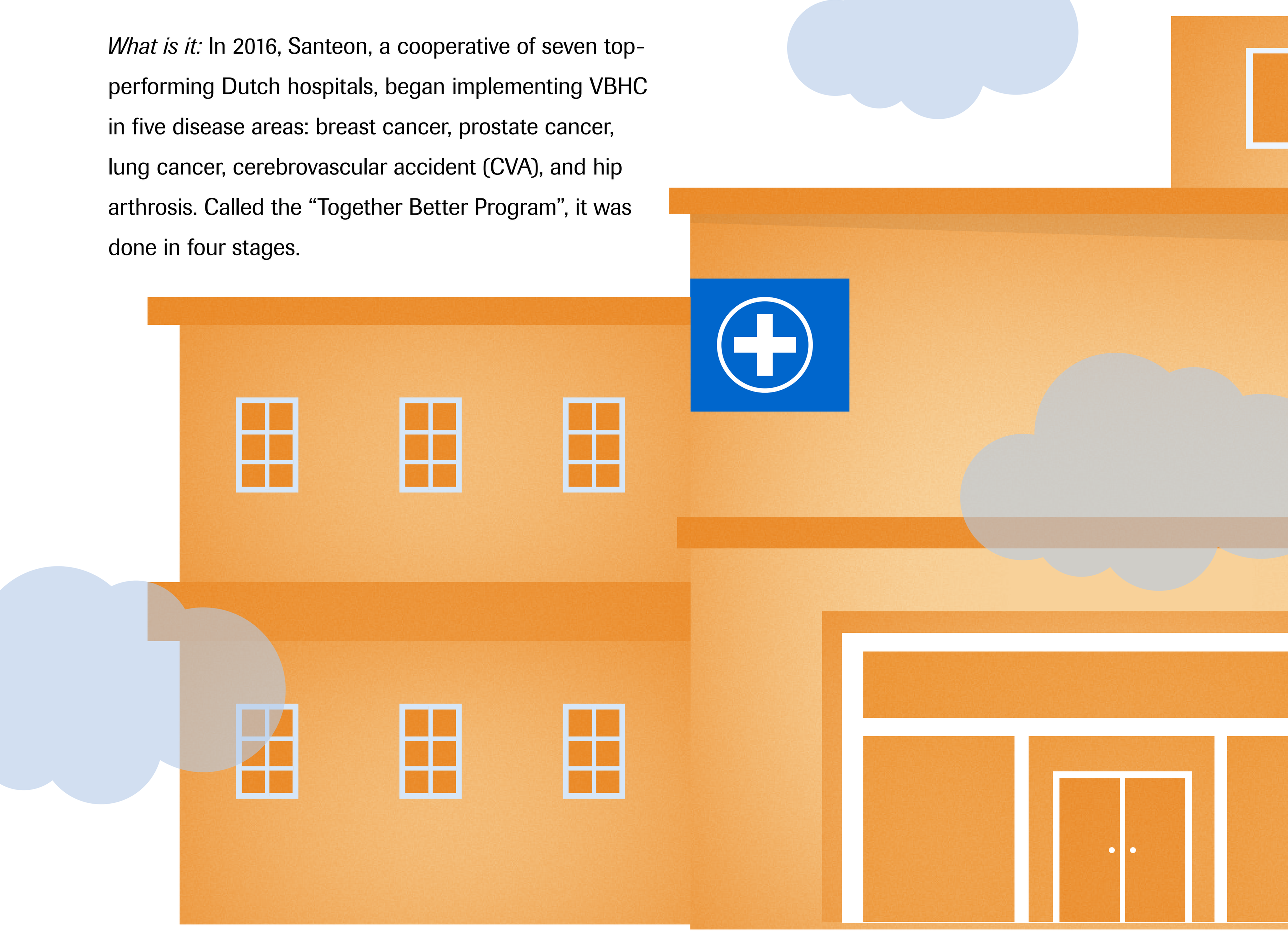
Diabeter has essentially followed the VBHC playbook: creating integrated practice units, relentlessly measuring outcomes and costs, moving to bundled payment schemes, integrating care between facilities and building an IT platform that collects real-time patient data. It has therefore become a great example of what VBHC can achieve for all stakeholders when properly and totally implemented.

*Please refer to reference 9 for all information in this section unless otherwise specified.

EXAMPLE 3

Netherlands: Santeon hospitals

What is it: In 2016, Santeon, a cooperative of seven top-performing Dutch hospitals, began implementing VBHC in five disease areas: breast cancer, prostate cancer, lung cancer, cerebrovascular accident (CVA), and hip arthrosis. Called the “Together Better Program”, it was done in four stages.



1. Create a multidisciplinary team to define metrics to improve outcomes.

2. Share and learn internally, then kicking off improvement cycles within the member hospitals.

3. Share results externally, after having validated the processes and data.

4. Engage with patients and payers to move toward value-based contracting.

Today, Santeon is running improvement cycles on 14 medical conditions.

Outcomes

Santeon has published results from three conditions (breast cancer, hip osteoarthritis, stroke) which have reached stage 3. Some results so far:

- 30% decrease in unnecessary inpatient stays
- 74% decrease in the rate of reoperation due to complications in breast cancer patients
- 23% decrease in patients with a stay of four days or longer around a primary total hip operation

Lessons Learned

The key to Santeon's success is that it has been scalable over multiple medical conditions, multiple hospitals, and with partners in the full care cycle. Like other VBHC efforts, Santeon has utilized several tools in the VBHC toolbox to its advantage, such as measuring outcomes and costs, value-based contracting with health insurers and information technology.

What sets Santeon apart is their extraordinary emphasis on culture. Santeon has pushed for transparency, openness and learning as critical components to achieve better patient outcomes faster. For example, during the evaluation phase, teams share data confidentially as a basis to build hypotheses for possible improvement initiatives and share best practices based on observed, clinically relevant differences. This is not done to judge others, but as a foundation for learning and improvement.

Likewise, Santeon's openness to outside feedback helps drive their success. Every Santeon VBHC team has patient representatives who provide valuable insights, while at the same time appreciate the impact that their participation can have on care.[11]

*Please refer to reference 10 for all information in this section unless otherwise specified.

EXAMPLE 4

Sweden: Innovative tender for wound care

What is it: When Stockholm County Council (SCC) tendered for wound-care products they assessed care delivery costs as well as the price of products. Suppliers were asked to demonstrate the total costs of care for three hypothetical patient cases - taking into account the costs related to complications for a variety of patients. The highest-priced product was chosen because the supplier demonstrated that they could offer the lowest overall cost.

Outcomes

- Shift from basing buying decisions solely on product price to buying product based on overall cost of care

Lessons Learned

The idea that “overall cost of care” and “price of products for care” are the same was dispelled in the SCC decision. Generally, contracts are often granted to the lowest bidder – i.e. the company offering the service or solution at the most advantageous price. But is this always wise?

Rather than looking simply at the lowest price per piece, the SCC instead forced bidders to calculate the total cost of treatment for each hypothetical patient, along with evaluated outcomes for such treatment. While selecting the lowest bid may save money up front, it may cost more in the long run.

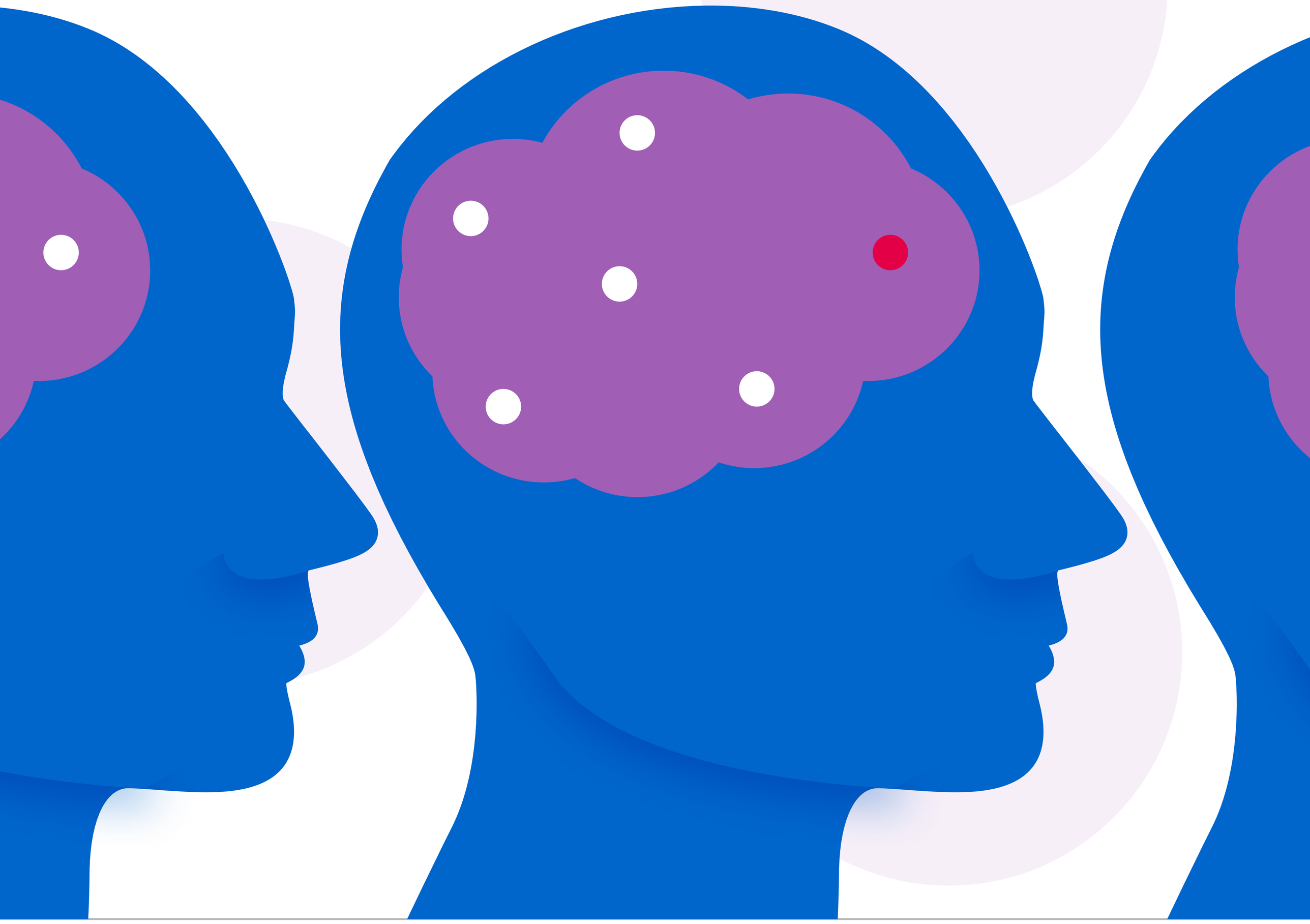
By adopting this holistic and wider view of the cost of wound care, the SCC were able to estimate the “true” costs of treatment. The winner’s products were the highest-priced, but they were able to demonstrate that they would lead to a lower total cost of care over time and could document its claims with clinical evidence.

*Please refer to reference 12 for all information in this section unless otherwise specified.

EXAMPLE 5

Brazil: Joinvasc stroke program

What is it: Joinvasc is a stroke care program implemented at Joinville in Southern Brazil. The goal of the program is to improve stroke prevention and outcomes for people living in this area. The program was started in 1995 with all suspected stroke or ischemic attack patients taken directly to a dedicated central stroke unit. Since then, patients have been treated and rehabilitated by a specialized multidisciplinary team. Upon discharge, all patients are given an established treatment plan, with follow up from dedicated staff.



Outcomes

- Increase in the volume of patients with stroke admitted to the core hospital, from 68% in 2009-2011 to 83% in 2018-2020
- 58% reduction in 30-day stroke lethality since 1995
- 37% reduction in stroke incidence since 1995
- 49% increase in the proportion of patients with a functional improvement after a severe stroke since 2010

Lessons Learned

The Joinvasc program has clearly had an important impact on stroke incidence and treatment in Joinville, significantly improving patient outcomes. However, even beyond improved outcomes, the program's other genius is a relentless focus on learning and improving over time.

Since 2009, Joinvasc has been systematically collecting clinical and epidemiological data, patient-reported outcomes, and radiological and genetic information throughout the full cycle of care. In addition, direct, indirect, and social costs are also collected. Together, this treasure trove of patient data has become an invaluable resource to help other developing countries calculate the economic burden of stroke locally. In addition, it has been the basis of numerous scientific publications.

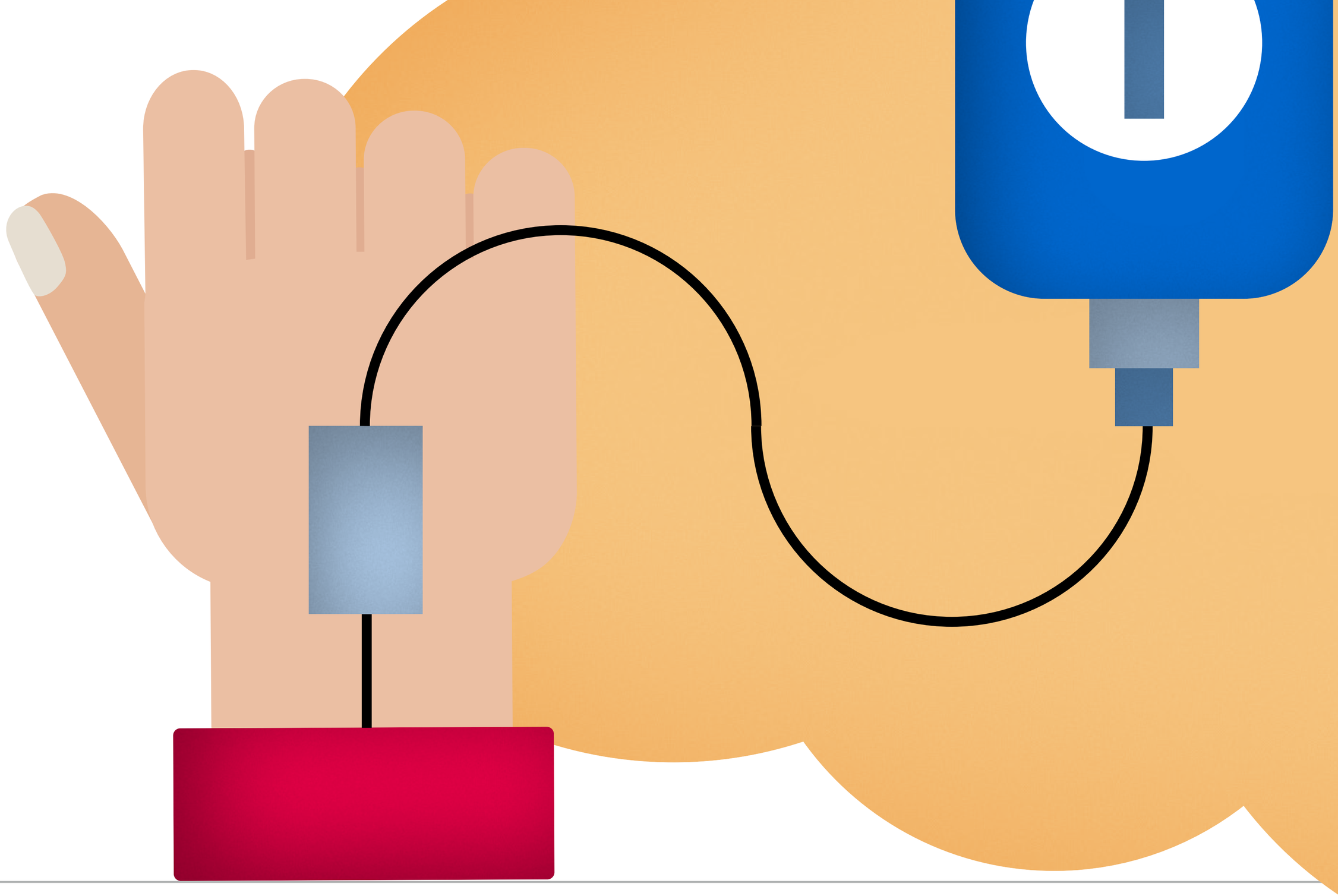
The pursuit of data collection, sharing and learning has helped Joinvasc become a reference program worldwide, which demonstrates the power of persistent and ongoing data collection over time.

*Please refer to reference 13 for all information in this section unless otherwise specified.

EXAMPLE 6

Norway: Tender for intravenous catheters based on patient feedback

What is it: Following the purchase of low price syringes that caused high pain levels and many failed injections, the Helseforetakenes Innkjøpsservice AS (HINAS), a company owned by the four regional health authorities in Norway to coordinate public procurement, tested products from competitive bidders for a period of two months prior to awarding the final bid. In the end, they awarded the tender to the product that received the best patient rating. These were more expensive, but caused less pain and were associated with lower failure rates.



Outcomes

- Shift from basing buying decisions solely on product price to buying product based on overall cost of care and patient reported outcomes.

Lessons learned

This is an example of patient feedback not only being important, but a critical component of the healthcare procurement process. In this tender, low levels of patient-reported pain were used as one of the evaluation criteria. During the evaluation phase, all competing products were tested in several hospitals, and in the end, patients and nurses were asked to rate the products after using them in multiple settings.

Armed with this information, HINAS awarded the tender based on a combination of cost and qualitative ratings, and did not select the lowest cost bid.

VBHC programs need to rely on value-based procurement. Beyond price, more weight is now being given to patient outcomes. Input from healthcare providers, resource utilization, and the total cost of care are also considered.

Overall, like in other aspects of VBHC, the focus is on value, rather than just price. In this case, the winning product caused the least pain for patients, and were least likely to break or require multiple attempts to administer. Overall, they were offered improved value, not only to the healthcare systems, but also to healthcare staff who had to administer the catheterizations and to the patients themselves.

*Please refer to reference 12 for all information in this section unless otherwise specified.

EXAMPLE 7

Australia: Exercise as Medicine

What is it: Nearly 60% of Australians with a diagnosed mental health condition have one or more chronic conditions, with a life expectancy almost 10 years shorter than other Australians. Overall, more than half of Australians fail to get enough physical activity. Chronic Care Australia was formed to help protect against chronic illness with the correct dose of exercise medicine, delivered via a combination of face-to-face, virtual, and home-based programs and services. The Exercise Medicine program works to treat, manage and prevent mental and physical illnesses concurrently by looking at the whole person, so that all aspects of health are considered in individualized treatment plans.

Outcomes

- Strong and frequent adherence to exercise (85.3%)
- Reduced blood pressure, improved motivation, self-perceptions of chronic mental and physical health condition indicators
- Increased ability for participants to work while enrolled in the program
- A statistically significant reduction in stress and anxiety in assessed participants who had not previously been diagnosed with a mental health condition
- A significant reduction in all three symptom scores for depression, anxiety and stress in patients who presented with primary mental health diagnoses

Lessons learned

Chronic disease, particularly combined mental and physical conditions, can shorten the length and quality of life in sufferers and has an enormous financial and social impact on families, communities and the healthcare system.

Physical inactivity is one of the two leading modifiable risk factors for chronic disease (along with diet). Chronic Care Australia has aimed to create a simple, repeatable and patient-centered approach to help treat mental health in Australia that considers all aspects of patient health. Their exercise medicine delivery and prescription system aims to treat, manage and prevent mental and physical illnesses concurrently. Patient outcomes are at the heart of VBHC, and by sometimes looking beyond traditional pharmaceutical treatments, great strides can be made.

*Please refer to reference 14 for all information in this section unless otherwise specified.

EXAMPLE 8

Denmark: Good Life with osteoArthritis (GLA:D®)

What is it: Good Life with Osteoarthritis in Denmark (GLA:D®) is a not-for-profit initiative launched by a research team at the University of Southern Denmark in 2013.

The goal of the program is to implement a standardized, yet individualized, treatment plan for osteoarthritis that includes both patient education and exercise therapy sessions delivered by trained physiotherapists.

The program is supported by a national electronic database that collects both patient-reported and functional outcomes to ensure that the treatment addresses the outcomes patients care most about.

Outcomes

- Reduced sick leave following GLA:D® treatment
- One in three people stop taking pharmaceutical treatments (paracetamol, non-steroidal anti-inflammatory drugs and opioids) for knee/hip pain
- Decrease in pain by 25% on average
- Patients walk 10% faster, experience improved function, quality of life and physical activity level
- Over 90% of the patients are ‘satisfied’ or ‘very satisfied’ with GLA:D® after having completed the program

Lessons learned

The impact of osteoarthritis on society is considerable: it disables about 10% of people who are older than 60 years, compromises the quality of life of more than 20 million Americans, and costs the United States economy more than $60 billion per year.[16] The same is true across the world, where societal, work and health impacts are considerable.[17]

Despite the fact that treatment guidelines emphasized patient education, exercise and weight loss, in clinical practice this wasn’t having the intended effect. The GLA:D® program aims to reduce low-value treatments that address symptoms, and instead shifts resources to more impactful, high-value and more holistic treatments that truly make a difference - and all with a positive cost impact to the system. Moreover, this is a system that is easily adaptable, and has since been rolled out across health systems in Canada, Australia, and China.

*Please refer to reference 14 for all information in this section unless otherwise specified.

EXAMPLE 9

US: Cleveland Clinic

What is it: Depression is often underdiagnosed, both because patients are reluctant to discuss this with their doctors, and physicians often don't have the time or skills to determine if depression might be present. Depressed individuals are at higher risk for cardiovascular disease, hypertension and diabetes, with higher morbidity and mortality.

To combat this, the Cleveland Clinic organized interdisciplinary teams enabled by a common electronic medical record (EMR) that curates relevant patient information to support physicians in making care decisions and deploying resources.

In recent years, patient-reported data to help capture self-reported functioning and barriers to care have been incorporated as they are increasingly recognized as important dimensions in patient engagement and health-seeking behaviours.

Since 2017, every patient age 12 and older is asked to answer the depression screening questionnaire (PHQ) annually, and more recently, the Patient-Reported Outcomes Measurement Information System (PROMIS) and Social Determinants of Health (SDH) questionnaires have been deployed.

Outcomes

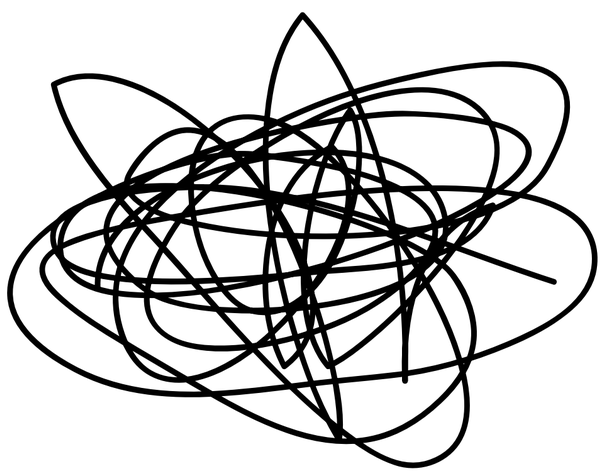
Data represented by 135,000 screened individuals by the Cleveland Clinic show that:

- Patients with depression or poor self-reported functioning are twice as likely to end up in emergency room care
- A larger proportion of patients identifying as depressed were hospitalized versus those who did not report depression symptoms
- Following intervention by the primary care team, the rate of emergency department use decreased by half for patients whose PHQ or PROMIS scores improved, representing savings of USD 1.3 million

Lessons learned

Cross-functional teams are critical. In this case, the intervention needed to be helped along by a comprehensive care team. In addition, the Cleveland Clinic used access to curated and relevant patient data from electronic health records. From these records, insights to help drive treatment decisions were derived. In addition, the teams took patient-reported outcomes and measurements into consideration in order to overcome access barriers to care and improve patient engagement.

*Please refer to reference 18 for all information in this section unless otherwise specified.



VBHC: Improving patient outcomes

while eliminating waste

Enormous investments are being made in health, and yet these are not translating into fundamental improvements in health outcomes. In fact, in higher income countries, greater healthcare spending does not seem to correlate with improved care or health outcomes at all.[19, 20]

There is also considerable waste in healthcare systems. The Organization for Economic Cooperation and Development (OECD) published a report in 2017 on wasteful spending in healthcare. The report said that at least one-fifth of healthcare spending could be channeled towards better use.[21]

Many patients are unnecessarily harmed at the point of care or receive unnecessary or low-value care that makes no difference to their health outcomes.[21] According to Professor Gregory Katz, professor at the University of Paris School of Medicine, “unnecessary

treatments can be performed without complications, and thus remain undetected despite the fact they do not enhance patient quality of life."[22]

There is substantial room to improve the transfer from low-value care, such as treating symptoms in the emergency care setting, to high-value care efforts and prevention.[21]

On top of this is an unprecedented demographic shift occurring in higher income, typically Western countries.[23] This is characterized by an aging population at high risk for an avalanche of chronic diseases in the next years and decades coupled with low birth rates below replacement rate.

So, how can a health system sustain itself if its spending is not resulting in better outcomes, paying contributors become fewer, while the number of individuals with chronic conditions increases?

There is growing evidence to support that VBHC can help to improve patient health outcomes around the world, while at the same time, optimize healthcare system spending. And, we don't need to wait for the future to see the benefits.

The Netherlands is a country with a typical Western demographic that has been a pioneer in VBHC implementation. Already, 173 Dutch VBHC initiatives have driven €1 billion in cost savings.[24] Early evidence has shown that VBHC implementation can influence the cost curve, lowering projections for spending in 2040 from €175 billion to €150 billion.[24]

Despite the benefits, implementing VBHC is easier said than done. This is because it requires the very fundamentals of how healthcare is delivered to be rethought. Resistance to this change is often found in the traditional siloed culture within healthcare organizations themselves. This must change: appropriateness of care must become central to value.[25]

Because VBHC programs involve extensive work to measure outcomes, create practice units, integrate delivery across units or sites and reevaluate payment systems, there are many partners who must contribute. Only by getting the buy in and cooperation from multiple stakeholders across the healthcare ecosystem can implementation be successfully achieved.

The fact is, hundreds of private and public organizations across the world have already understood this, and have begun to implement VBHC initiatives, on scales both large and small. These examples span the spectrum of countries and health systems, but these pioneers all share the same goal – to maximize outcomes that matter most to patients. The tools required to do this exist, and are available today.

We have the data, the tools and the blueprints for success. It is no longer a question whether healthcare organizations should make the change to VBHC, but rather what will happen if they don't?

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