A stronger healthcare system requires bold new ways of working together
Introduction

These are turbulent and trying times for health systems striving to deliver quality care at a sustainable cost. Their resolve to do so – despite the challenges they face – is on remarkable display every day in care settings of every variety. As health systems are called upon to perform like never before, we must also seek new ways to help them transform to meet the evolving needs of our ‘new normal.’ As we seek ways to help, we also must seek ways to earn the trust that is tantamount to productive partnerships.

Health systems have demonstrated remarkable tenacity against great odds

Adapting to unpredictable patient volumes and the resulting impact on healthcare jobs
• Healthcare providers used their skill sets in different roles to provide expertise and extra hands.¹
• In 2020, there were large fluctuations in ICU bed use, with 13,000 COVID-19 patients in ICU in March vs more than 23,000 in December.²
• Hospitals and health systems suffered $202.6 billion in losses between March and June 2020.³
• 1.5 million healthcare jobs were lost between February and April 2020.⁴

Courage and commitment amidst the uncertainty of a continuing pandemic
• Due to global shortages in personal protective equipment (PPE), healthcare workers have had to come up with ways to reuse face masks and other equipment or go without proper PPE altogether.⁵
• Healthcare workers have been working for more than 200 days in what may seem like an uphill battle to support colleagues and meet patient care needs.
• Thousands of healthcare workers worldwide have died due to COVID-19.⁶

Openness to and rapid scaling of new technology, namely telehealth
• Telehealth services are growing exponentially. During the first quarter of 2020, the number of telehealth visits increased by 50% compared with the same period in 2019.⁷
• Meanwhile, providers and staff have had to adjust to a different type of care delivery as they take on increased volumes of telehealth visits, seeing 50 to 175 times the number of patients via telehealth solutions than they saw before the COVID-19 pandemic.⁸
Introduction

Health systems continue to face considerable challenges

Clinical teams are weary

55%

of physicians in one survey reported that COVID-19 had increased their feelings of burnout.9

Across healthcare systems, clinicians are feeling the strain of these times. In nearly 9,500 critical care providers surveyed, self-reported stress has escalated from a median score of 3 to an 8 during the pandemic.10 Additionally, up to 55% of physicians in another survey reported that COVID-19 has increased their feelings of burnout.9 During the pandemic and beyond, solutions will be needed to meet this ongoing challenge of stress and burnout.

Cybersecurity and interoperability challenges persist

196%

increase in cybersecurity data breaches occurred from 2018 to 2019.11

When it comes to cybersecurity, the data is concerning. From 2018 to 2019, a 196% increase in cybersecurity data breaches occurred, exposing 41.3 million patient records11 for an average cost of $3.86 million per breach in 2018.12 In the face of mounting cybersecurity threats and vulnerabilities, health systems will need to take a proactive approach to security, harnessing innovative ways to protect their health technology and patient privacy.

In a world where sharing data across settings is imperative, security is not the only challenge. The challenges of interoperability are also complex, as healthcare systems must share accurate and timely information with patients and healthcare providers across a variety of settings.

Financial pressures are mounting

70%

of healthcare executives surveyed predicted a deteriorating payer mix.13

Health systems are facing solvency issues that have heightened since the pandemic began.3 In one survey, 70% of healthcare executives predicted a deteriorating payer mix, with an increase in consumer self-pay and Medicaid along with a decrease in commercial reimbursement.13

Unfortunately, these thin margins are stretched even more by a vexing mix of factors.14 For example, decreases in spending in elective/growth areas have occurred as many healthcare services have been delayed due to the pandemic. At the same time, increases in costs related to pandemic care have also occurred. Finally, uncertainty surrounding both the timing and extent of recovery brings new challenges to financial planning.

Industry consolidation is complicated

Hospital consolidation leads to higher prices15

The pandemic has exposed structural weaknesses in an industry where bigger was presumed to be better. Yet, the Medicare Payment Advisory Commission reported that “the preponderance of evidence suggests that hospital consolidation leads to higher prices.”15

Forces for consolidation are not likely to abate with the pandemic, prompting vulnerable healthcare practices and organizations to take cover under the protection of larger systems whose backers now include private equity firms seeking to extract yet more value from systems already under stress.
Positioning health systems for a better future

Leaders from a wide range of public and private health organizations – from independent community hospitals to regional integrated health networks to large, multistate health systems – are seeking decidedly new ways to enable them not only to weather this turbulent time but to be better positioned to proactively manage their future. Stronger healthcare systems serve us all, bridging the gaps, addressing the disparities and meeting the needs – so we are all stronger, together.

This is not easy to achieve – and harder still as a result of the pandemic. While point-by-point adjustments – a new scanner here, an adjusted imaging workflow there – can provide momentary relief for an overburdened unit, health systems also are looking at the bigger picture – scaling their operations, extending their care delivery and planning for long-term growth.

Lasting improvements are the goal and may be more likely when organizations can harness the strength of partnerships to both evolve with agility and grow strategically. As is true of many partnerships, partners serving health systems must earn the trust of the teams they serve.

Evolving with agility to deliver value-based care

Partnering with experts in the broader healthcare ecosystem allows health systems to meet current challenges by first standardizing and modernizing technology so teams are well supported in their efforts. It also means helping organizations be even more proactive so they can deliver upon their objectives with fewer constraints and greater speed. This is also important so they can respond well to unprecedented events and market shifts that invariably occur on the path to providing patient-centered, value-based care.

Forming long-term business relationships to grow strategically

It is valuable to build lasting and trusting engagements with technology partners and others based on deep expertise, close collaboration and a shared commitment to healthcare innovation, as well as on shared accountability for managing costs, complexity and risk.

Health systems are evolving rapidly

Many health systems were already evolving rapidly even before the pandemic and may continue being incentivized to transform their care delivery models. Now, in addition to mounting a massive response to a once-in-a-century public health crisis, they may also be accelerating cost-containment efforts through:

- Continued emphasis on enabling virtual care and care at home
- Ongoing mergers and acquisitions to facilitate greater efficiency and scale
- The formation of broad alliances with the aim of shifting certain care out of the hospital to lower-cost settings
- Striving to standardize while avoiding vendor lock-in and disparate systems

These efforts are more necessary than ever but may not be enough to meet the chasm of needs facing health systems today and tomorrow.
Why build strategic long-term relationships?

Strategic collaborations can begin from a variety of starting points – from goal alignment within a department or among executives from different organizations who have a mutual affinity for innovative business models. Regardless, long-term relationships can address operational, technical and clinical needs and drive efficiencies. They are fundamentally different from traditional transactional models and are based on shared accountability, risk and reward. A shared accountability model involves choosing a partner that is invested in putting the organization on a pathway to confident growth. A health system’s partners can come from the surrounding ecosystem and should include entities that are well positioned to help. See criteria for consideration on page 7.

New challenges require new ways of working

From a transactional to a shared accountability model that fosters continuous engagement and commitment to outcomes

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**Traditional transactional model**

- Health system
- Strategic partner

For example: Equipment and service delivery with service-level agreements

**Shared accountability model**

- Health system
- Common goals
- Strategic partner

Joint commitment to quality, efficiency and cost metrics = value for patients
Long-term strategic partnerships are the kind of hand-in-medical-glove collaboration that many health systems are seeking today. These mutually beneficial relationships not only provide the reliable technology health systems need but also relieve stress on day-to-day operations, which in turn drives positive experiences for clinicians and users so health systems can reach their goals of improving patient care. To serve as such a partner, organizations need to bring expertise gleaned from a history of collaborating with health systems around the world and in driving technology and industry standards.

How do long-term partnerships yield benefits beyond needed technology?

Long-term partnerships are proactive in nature and provide a variety of benefits that may include:

- **Technology management plans** to anticipate and meet the organization’s evolving technology needs and to accelerate adoption
- **Planning and governance for clinical and workflow training programs** to ensure a coordinated approach to both identifying the need for and implementing training across the enterprise
- **Dedicated customer delivery management to prioritize integration and adoption** to ensure alignment with the overall program delivery and defined objectives
- **Coordinated approach to service** to plan for service communications and escalations
- **Innovative financial models**, such as unitary payment models, service models, and consulting and clinical services funding pools that are not tied to a single business or solution. In some instances, risk sharing is included
- **Long-term planning for data analytics** to guide decision-making and report overall results of the partnership to the health system
- **Clinical and innovation working groups** to identify and prioritize opportunities for innovation across the enterprise, driving a shift away from ‘business as usual’ activities toward innovation to solve novel problems with new solutions

Positioning health systems for a better future
What criteria should be considered when selecting a long-term strategic partner?

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Does the organization have or provide?</th>
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| **Business model considerations** | - Openness to exploring multiple ways of working and varying payment models, including value-based risk sharing  
- Alignment to measurable, mutually agreed-upon key performance indicators  
- A commitment to ROI |
| **Clinical considerations** | - Clinically tenured personnel  
- A broad range of clinical verticals  
- Proven near- and longer-term strategies to improve workflow efficiency |
| **Technical considerations** | - Secure technology that enables seamless data transfer across clinical settings  
- Scalable, platform-based approaches that utilize open standards  
- Robust, reliable and proactive services and support  
- Solutions that capture, digitize, analyze, and share data to support collaboration and create actionable insights |
| **Overall considerations** | - Long heritage of healthcare innovation  
- Global network and reach  
- Long-standing collaborative partnerships with a wide range of health systems  
- Demonstrated ability to anticipate, plan, pivot (as needed) and deliver on shared commitments |
Philips long-term strategic partnerships are built on a solid foundation

When faced with large, systemic challenges, health systems can choose to leverage long-term partnerships to help them achieve their short- and longer-range technical, clinical and business goals. At Philips, we believe that effective partnerships can build pathways for organizations to improve and grow confidently and create innovative solutions that make a meaningful impact on patient care.
Shared accountability
Partners create a trusting relationship based on shared accountability, shared reward and, often, shared risk, as well as on transparency. Where possible, the relationship is also enhanced by embedded Philips experts who work alongside teams within the healthcare organization.

For example, when MarinHealth in California was seeking significant expansion, a partnership with Philips went beyond basic service-level contracts, enabling successful growth and evolution through a model of shared risk and shared responsibility.

See Spotlight on page 12.

Ongoing predictability
Partners enter into agreements and working relationships with clearly defined strategic goals, key performance indicators, ongoing assessment and predictable spend, providing clarity from the start and throughout the engagement. This kind of predictability is especially important in cardiac care.

At Miami Cardiac & Vascular Institute, a strategic partnership with Philips has established common goals to reduce variation and improve consistency in performance and outcomes.

See Spotlight on page 14.

Performance improvement
Partners collaborate by taking a stepwise approach to modernizing and standardizing technology to address current challenges and then optimizing and enhancing to continue improving clinical, operational and financial performance.

We can see this goal in action via a Philips partnership with Phoenix Children’s Hospital, which helped serve children and their care teams by expanding access to advanced technology, products and consulting services.

See Spotlight on page 13.

Purposeful innovation
Partners discover and co-create tailored and innovative solutions to help the organization solve complex challenges and be well positioned to deliver on the quadruple aim of healthcare, creating sustainable value for multiple stakeholders.

Increasing care access for US veterans presented this kind of complex challenge, inspiring an innovation partnership among Philips and key veterans groups and the subsequent launch of a unique, highly successful access program.

See Spotlight on page 15.

Sometimes embedding within an organization, we form close working relationships with teams to understand our partner’s challenges, identify opportunities and jointly build strategies and plans for mutual benefit. Philips understands how decisions are made within health systems and the executives’ need to build consensus among decision makers in multiple departments. Together with our health system partners, we share a commitment to quality, efficiency and cost metrics that create value for patients.

Next, we take an in-depth look at a Philips partnership in action with Banner Health and cast a spotlight on some of our health system partners.
How do you help your patients be their healthiest while scaling the reach of your services, perfect the patient experience and inspire your staff of caregivers? That’s the mission-driven question that inspires Arizona’s Banner Health, one of the largest nonprofit healthcare systems in the United States and a Philips innovation partner creating the next generation of distributed patient care.

Banner Health serves more than one million members across 30 hospitals in 6 states, including 3 academic medical centers, long-term care centers, outpatient surgery centers and an array of other programs including family clinics, home care and hospice services, and a nursing registry. Banner has always taken a long-term view of their business and, with an eye on the rapidly evolving healthcare market, signed a 15-year agreement with Philips in 2017 to extend successful connected healthcare programs, transforming care and lowering costs while improving quality of care. The partnership is mutually beneficial. Banner provides deep clinical expertise, operational insights and thousands of care workers – boots on the ground, so to speak – all of which help to provide a clear understanding of regional and national health issues. Philips, on the other hand, brings technological expertise and cutting-edge external perspectives gleaned from collaboration with over 300 healthcare organizations worldwide and deep knowledge and research in connected care and population health management. This helps identify blind spots and opportunities to deliver integrated solutions designed to improve the health of Banner’s patients.
Evolving from separate contracts to a more connected approach
Beginning from separate service and research contracts within the Banner network, the partnership is designed to further examine how Banner facilities can take a more connected approach around health spaces, such as cardiology and maternity, by incorporating advanced imaging and interventional technologies, genomics, digital pathology and data analytics. The partnership also evaluates innovative services and business models that could enable Banner to adopt the latest in healthcare technologies, regardless of company, in order to deliver on their mission – to make healthcare easier, so life can be better.*

Establishing a shared governance structure
All of this work is underpinned by a governance structure. Philips and Banner both believe success is dependent upon moving from a transactional model managed by limited-scope service-level agreements to a model rooted in shared accountability, where both parties share a joint commitment to quality, efficiency and cost metrics. Such a model positions both Philips and Banner within a framework of predictability, shared risk, continuous improvement and reduced operating expenses – all of which increase the opportunity for innovation and better patient outcomes.

Today, the partnership continues to connect the dots between Banner leadership, their business units and the goals of research and innovation. Banner and Philips hold biweekly core-team calls to focus on priority projects.

Discovering innovation opportunities
An integral part of Philips approach is the co-create process, a collaborative activity that allows Philips and health systems to gain an in-depth understanding of people in a specific context. This approach depends on transparency, empathy and an understanding of what each health system wants to do and where they want to go. This co-create process benefits from the health system’s unique, on-the-ground experience combined with Philips expert approach to human-centered innovation.

In the case of the Banner Health partnership, Philips and Banner wanted to brainstorm how and where they might innovate next. In a co-create session (conducted virtually during the pandemic), Philips and Banner executives and departmental staff worked together to identify pressing health concerns across Banner’s six-state footprint. The team then framed challenges, opportunities and journeys from existing state to ideal state so they could identify a chief concern to address; in this instance, it was reducing the higher rates of maternal mortality found in rural areas compared with rates in wealthier and more connected regions. Some rural pockets, in fact, lack access to OB-GYNs and primary care physicians. The team then brainstormed with a persona of Sofia – a thirty-something mom and caretaker of aging parents – in mind. Among the options considered, it was determined that Philips Lumify POC ultrasound could be deployed to better monitor expectant mothers. Philips Lumify powered by Reacts enables providers in these rural locations to consult and share data in real time with physicians in surrounding communities. Banner physicians were consulted and open to this initiative, setting the stage for success.

Emblematic of a true partnership, Philips and Banner were both strategic and agile in their approach to addressing this important concern about maternal health, as they are with other areas for short-range improvement and longer-range innovation to serve the organization’s goals.

For more details, please see our customer story.

*Results are specific to the institution where they were obtained and may not reflect the results achievable at other institutions.

— Peter Fine
President and CEO
Banner Health

“We are committed to our mission of making healthcare easier, so life can be better. To do that, we need to work collaboratively with innovative technology partners such as Philips.”
Transforming a community hospital into a vital hub of connected care

As an independent hospital in Marin County situated between bustling population centers – San Francisco to the south, Oakland to the east, Napa and Sonoma to the north – MarinHealth is ranked as one of the top hospitals in the country for clinical excellence in cardiac and pulmonary care and was recently named one of America’s 100 best for cardiac care by Healthgrades.16 It is a ‘small but mighty’ hospital that is fully committed to community health. But as MarinHealth began to pursue an ambitious growth plan for their facility, expanding from 240 to 320 beds, executives knew they’d need to overcome not only healthcare industry challenges but also local competition with larger health systems. Without large health system resources, MarinHealth couldn’t spend their way to success. Instead, they needed to be smart about how they grew, developed new business lines and implemented advanced clinical technology.

To achieve these goals, MarinHealth and Philips embarked on a 15-year, $90 million enterprise partnership aimed at transforming care while also constructing a new facility that would bring cutting-edge services and clinical workflows to the hospital. Going far beyond service-level contracts, the enterprise partnership provides MarinHealth with a strong governance structure focused on delivery of equipment, services and business consulting, all through a model of shared risk and shared responsibility. When MarinHealth needed a large capital expenditure investment, Philips helped by supplying a range of connected health technologies and services, including imaging systems, patient monitoring, and telehealth and clinical informatics solutions, as well as clinical education and consulting. Nearly 40 transformational projects were implemented, from enhancing cath lab performance to the launch of a new Breast Health Center in June 2017.

By leveraging all the services and knowledge that an independent hospital would not otherwise have access to, MarinHealth can focus on providing high-quality care for their community, making strides at reducing costs and increasing satisfaction, and keeping patients conveniently within their home county while still having access to the latest technology.

For more details, please see our customer story.
Serving the unique needs of children’s hospitals

Among specialty medical centers across the US, children’s hospitals face unique growth as well as clinical and technological challenges. They tend to specialize by focusing on genetic conditions and psychosocial support instead of chronic illness, which means they’re highly invested in patient monitoring technologies, which Philips has been committed to for nearly two decades.

Building on its established clinical excellence, Philips entered a first-of-its-kind partnership to develop products, technology and services with Phoenix Children’s Hospital to address the needs of children who come to the hospital from around the world. The 15-year partnership gives Phoenix Children’s Hospital strategic foresight and access to Philips advanced medical technologies like imaging systems in CT, MRI and angiography as well as patient monitoring, clinical informatics solutions and a comprehensive range of clinical and business consulting services.

This long-term investment also allows for greater asset planning and management while providing data-driven clinical decision support that enables strategic cost reductions, enhanced staff experience and better patient outcomes. Results thus far include new dosing protocols in its imaging equipment that are child sized and appropriate for particular age groups or a particular organ. These protocols were codesigned and tested by Phoenix Children’s Hospital and Philips. And the research and technologies on dose management using iterative CT reconstruction and spectral multi-energy CT combined with specific pediatric CT and MRI protocols are now standards in Philips equipment offered worldwide. Also, through the strength of the partnership, MRI exams have been shortened without impeding image quality, diagnostic confidence in pediatric brain tumor imagery has increased and the time to repair ultrasound systems has been reduced.

For more details, please see our customer story.
Partnering for the future of healthcare

The value of strategic partnership is keenly felt in cardiovascular (CV) care, which is a long-term, high-cost effort that calls not only for ongoing clinical innovation to optimize outcomes but also for workflow and business innovation to optimize operational efficiency. Increasingly, strategic partnerships with companies that provide innovative technology and services, among others, are important as health systems seek to reduce CV care variation, to address concerns about technology obsolescence and cybersecurity and to navigate the shift to population-based reimbursement models and outpatient care where appropriate.

For the team at Miami Cardiac & Vascular Institute (MCVI), part of Baptist Health South Florida, a long-term, productive relationship with Philips has been in place with the two organizations working together as innovation partners for 30 years. A tenured Philips team is continuing to collaborate with MCVI to identify their strategic CV care vision and uncover the root causes of the issues they are facing. This leads to recommendations for how to optimize resources to address, for example, IT management, facility design, clinical optimization and workflow efficiency, as well as capital cost reduction and variable inventory management – all so MCVI customers may realize greater performance, cost savings and improved outcomes.

Philips is aligned to data metrics, which will guide efforts and measure the success of the partnership with MCVI. These metrics include operational KPIs like reduced room turnaround time, intraprocedure time, variable supply costs and patient wait times. They also include clinical operation KPIs such as reduced procedural complication rate (CIN), CABG graft failure rates at 30 days and unscheduled PCI readmissions. Teams collaborate to optimize interventional lab utilization, streamline operations and address changing reimbursement and cost structures, among other goals.

For more details, please see our customer story.

**Partnering to foster clinical, operational and business innovation** at Miami Cardiac & Vascular Institute

“We need to have a vendor relationship that’s two-way, allowing us to participate in the development of that change and also allowing us to be the beneficiaries of technology that’s going to help us in taking care of our patients.”

— Barry T. Katzen, MD, FACR, FACC, FSIR, Founder and Chief Medical Executive, Miami Cardiac & Vascular Institute Chief Medical Innovation Officer, Baptist Health South Florida
Serving veterans and their caregivers through innovation partnerships

Health systems increasingly face complex challenges that go beyond optimizing technology and workflows. These challenges can often be met through what Philips teams call ‘innovation partnerships.’ Innovation partnerships begin from an elegantly simple premise: A customer wants to explore a challenge or opportunity in a focused, multidisciplinary and cross-functional way. Philips starts by asking, “How might we address this challenge in a way that makes the best patient and business sense?” This co-creation process involves customers and users so that innovation happens with their needs and workflows in mind and brings together people from multiple disciplines to benefit from broader knowledge and solve complex challenges. Philips teams then immerse themselves to explore customer needs and co-create standards- and platform-based solutions that work across multiple companies.

This is how Philips worked with the Elizabeth Dole Foundation, the Department of Veterans Affairs, the American Legion and the Veterans of Foreign Wars (VFW) to understand and map the journey of caregivers of veterans – the 5.5 million unpaid family members, friends and acquaintances who not only care for veterans but who themselves suffer significant physical, psychological and financial challenges for their efforts. Philips also worked closely with the Wounded Warrior Project to create and digitize the caregiver journey map.

That work then informed the development of the Philips Virtual Care Station for the ATLAS (Accessing Telehealth through Local Area Stations) program, a network of virtual care sites that provide telehealth services to veterans in VFW and American Legion posts across the country. With ATLAS, veterans could be examined at their local post and other nontraditional healthcare environments through virtual appointments with medical professionals across the nation, saving veterans highway hours and travel expenses while providing greater access than they had in the past.

During ATLAS appointments, veterans meet with providers through VA Video Connect, the VA’s secure videoconferencing software. In 2019, veterans had more than 294,000 appointments through VA Video Connect, which is a 235% increase from the previous year. Additionally, the development of the virtual care solutions for veterans contributed to the development of a community-based telehealth solution available to civilians as well.

For more details, please see our customer story.
Summary

Now more than ever – as a pandemic pushes the boundaries of our health systems’ capacity to a near-breaking point – we must simultaneously meet the magnitude of this moment and look beyond it to build the more resilient healthcare system we all need going forward.

This is no easy task. And it is a task made more challenging by the fact that we started with an already complex, fragmented and expensive system – a system that is now stretched and strained all the more.

Now is the time for ingenuity and tenacity. It is a time for trying new approaches and new ways of working. And it is a time for forming strategic and lasting relationships with partners who earn each other’s trust and support and share the goals of ultimately building a more scalable, agile health system.

These goals may initially be shorter range and involve modernizing and standardizing technology before turning to the next priority of optimizing and enhancing clinical, operational and financial performance. Other partnership goals may be longer range and involve researching and innovating to deliver on an organization’s strategic priorities.

The most effective of these partnerships are built on a foundation of deep expertise, close collaboration, trust and transparency, along with a shared responsibility for improving the organization’s ability to serve its patients and communities well while providing a positive experience for its staff.

Philips brings deep knowledge of the complex healthcare environment based on a long history of collaborating with health systems around the world and the sheer depth and breadth of its connected solutions. With its partners, Philips is heavily invested in co-creating solutions – a collaborative process that requires transparency, empathy and an understanding of what the customer wants to do and where they want to go, building stronger and more resilient organizations now and going forward.

This guide showcases how Philips works closely with customers to develop meaningful and lasting improvements to patient care.

Results from case studies mentioned in this paper are not predictive of results in other cases. Results in other cases may vary.

At Philips, we are inspired to bring meaningful innovation and productive partnerships to health systems around the world, helping them achieve even greater success for the patients they serve.
References


12. https://www.usa.philips.com/healthcare/articles/cybersecurity


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