



Early Lessons in Connecting Care Across the Continuum

Key insights from advances in cardiovascular care that pave the way for additional service lines

Despite considerable progress in diagnostics and therapeutics, cardiovascular disease (CVD) continues to kill one in four U.S. patients, which helps account for the 18 million people globally dying of the disease annually.¹ Even more worrisome is the expected rise in CVD due to comorbidities and aging populations.

There is, however, a significant shift occurring within cardiac care that bodes well for both managing CVD and mitigating anticipated patient loads. Healthcare organizations are looking beyond traditional borders to bring care into the home to help ensure continuity of care, reduce costs and provide a better patient experience.

To reach full potential, however, there must be greater connectivity, digital literacy and mutual trust, according to experts.² Yet despite current internet and inequity issues, there is enthusiasm surrounding the potential for connecting care across the continuum – not just for cardiac care, but other service lines seeking a similar approach to improving patient outcomes.

“I think we are living through an incredible time,” said Alexandra Gonçalves, MD, PhD, MMSc, Chief Medical Officer, Precision Diagnosis, Philips. “We’re making this transition toward empowering patients and that, in my view, can be transformative in how cardiovascular disease is tackled in the future.”

Transitioning care to the home

At the heart of this transformation is virtual care innovation, which reduces in-person appointments, so providers can better manage patient loads and flag warning signs, such as a post-discharge infection, to avoid rehospitalizations. Patients enjoy convenient access to physicians and specialists and a more active role in their care plans.

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ALEXANDRA GONÇALVES, MD, PHD, MMSC | Chief Medical Officer, Precision Diagnosis | Philips

The time, cost and stress savings can be considerable, especially for primary CVD patients with associated comorbidities. Cardiovascular patients with diabetes, for example, have higher associated costs and mortality rates and benefit from treating the patient holistically versus disease by disease, Gonçalves explained.

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Providing the means to diagnose and monitor

Medical device manufacturers and technology companies have long developed successful solutions for acute-care settings, including for patients with a variety of conditions that fall under CVD. As a result, more people don’t just survive major cardiac events, they live longer with CVD.

Gonçalves noted that 90% of women and 70% of men currently are alive 10 to 15 years following their first heart attack. “The problem with cardiovascular disease is that although we can treat the event, the disease remains there,” she said.

Factor in an aging population and delayed care due to the pandemic, and it’s easy to see why healthcare organizations are concerned waves of patients may soon overwhelm waiting rooms and emergency departments. Education, awareness and early prevention are key to riding out such swells.

Untreated hypertension, for instance, can lead to stroke, vision impairment, heart attacks and heart failure. “High blood pressure is tremendously under-diagnosed, tremendously underestimated in its importance,” Gonçalves said. “Having the ability to recognize it sooner, and to allow patients to actually control it effectively, will allow us to minimize [future] events that are very costly.”

This is where care programs can provide specialized medical support at home for people with challenging health issues. Health systems use tailored care plans and telemonitoring platforms to help people with chronic illnesses take control of their own health.

By using in-home technology, patients with complex health profiles spend less time in hospitals and are more apt to make behavioral changes that reduce risk factors at the foundation of CVD. There’s also a big benefit to health systems whose medical personnel are spread thin.

“We don’t have enough specialists to talk to hundreds of patients at the same time, but we do have the ability to construct a dashboard to monitor all of those patients at the same time,” said Ann Mond Johnson, CEO of the American Telemedicine Association (ATA). “Remote patient monitors help physicians practice at the top of their license while expanding their reach.”

Generating meaningful data is key

John Frank, Philips’ Business Leader for Ambulatory Monitoring and Diagnostics, sees numerous opportunities to apply cardiac care outside of the hospital. “As the pandemic eases in the United States, we take this time to pause and reflect on what’s worked well and optimize our approach to remote care for cardiac patients,” Frank said.

Such an evaluation should include examining how patients intend to navigate the care process in a post-COVID-19 world. Monitors, sensors and diagnostic tools that exist in hospitals today need to find their way into homes, particularly as consumers become more comfortable moving more of their life operations online, he said.

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But a major element of moving toward optimized care and workflows is the ability to meaningfully connect data generated by home-based diagnostics throughout a care cycle. One recent example of such integration is Philips' acquisitions of remote cardiac diagnostics maker BioTelemetry and medical device integrator Capsule to create more contextual data for clinicians.

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Frank sees the following trends driving strong interest in a more data-driven, patient-centric approach to general healthcare management.

- **Consumerism.** Consumers now have a greater say in their healthcare needs, and technology such as wearables helps them stay connected to their own care processes. Providing personalized data also can improve communications and care plan compliance.
- **Reimbursements.** When payers like the Centers for Medicare & Medicaid Services raised reimbursement rates for telehealth services during the pandemic, it signaled a shift in coverage parity with virtual care options. Those payment adjustments became permanent in 2021.³
- **Incentives.** As value-based care continues, healthcare organizations are incentivized to empower patients to take a more active role in their healthcare in order to avoid costly procedures or hospital readmissions. Wearables and mobile apps that provide biofeedback can be used to assist in those efforts.

Both Frank and Gonçalves noted the effect obstacles such as interoperability, clinical resistance, and security and privacy can have on digital health adoptions. They recommend that hospitals work with a trusted technology partner with a proven track record in the healthcare industry to overcome these common hurdles.

Learning from the sleep industry

With more than a decade of experience working in the sleep industry, Frank has witnessed how consumer wearables like fitness watches with sleep monitors raise awareness of potential sleep issues affecting individuals' overall health. He believes the same system can apply to cardiovascular health and other service lines, providing the impetus for people to discuss their personal health data with a primary care provider, who can then provide good clinical oversight using the same instruments.

"Adding a bunch of sensors and monitors on heart patients isn't the answer," Frank warned. "It needs to be done in a way that brings together data in an aggregated fashion so it's available to the physician in a way that helps them make the best decisions for a patient. That holds tremendous promise."

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Recognizing modern care delivery strengths

The ATA's Mond Johnson believes telehealth and other virtual services saved the healthcare system from imploding in the early months of the pandemic.

"When people were confused about what to do or where to go, whether their symptoms were consistent with the virus, they were able to access an online resource – through their phone or computer – and determine what they should do," she said. "The tools provided by members of the ATA were incredibly useful in helping folks understand what path to take, while reducing exposure to the virus for communities and frontline healthcare workers."

Having telehealth and other forms of virtual care also can improve another common link to coronary events: depression. Mond Johnson said that when patients with depression can engage online without leaving their homes, no-show appointment rates drop significantly. Additionally, clinicians gain more insight into environmental issues that may impact a patient's mental health.

Keeping the focus on outcomes, not objects

Mond Johnson noted the importance of focusing on health outcomes, not just how the care is delivered. "We're delivering healthcare, not technology. The technology is a means to an end," she said.

It also means reframing what constitutes care venues as healthcare continues its metamorphosis from a disease-driven to health-driven industry – remembering that relationships are at the heart of all cardiovascular care plans.

"This is a team effort," Frank said. "It's technology and sensors, but also quality care provided by clinicians that can provide the oversight to make a major impact on patients' lives. Health systems today are beginning to recognize that they need to move beyond their four walls; they need to set themselves up for care outside of the hospital."

See how Philips presents a cardiovascular continuum from hospital to home, enabling patients to receive care anywhere. Philips HealthSuite supports general and disease pathways and is optimized for the delivery of healthcare across care settings.

- www.usa.philips.com/healthcare
- www.gobio.com
- capsuletech.com

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