Virtual health
Continuing the journey to further humanize health care
Virtual health is supporting continuing efforts to further humanize health care by extending and expanding the concept of a patient-centric care delivery model into one that is truly life-centric.

Virtual health uses telecommunication and networked technologies to connect clinicians with patients (and with other clinicians) to remotely deliver health care services and support well-being. For providers, committing to virtual health at a personal and organizational level affords ever-increasing opportunities to deliver the right care at the right time in the right place, in a connected and coordinated manner.

By strengthening and facilitating a therapeutic alliance between clinicians and patients, virtual health is an important step on our continuous journey to humanize health care. It works within and around a patient’s life, as opposed to their sickness, to deliver care when, where, and how they need and want it. Also, virtual health works its way into consumers’ daily routines by being embedded in electronic devices associated with living life (e.g., smartphones and personal computers) more so than caring for sickness.

The health care industry is primed for expanded adoption of virtual health; a 2016 report estimated that the US virtual health market will reach $3.5 billion in revenues by 2022. Several factors are elevating stakeholder interest, including expected physician shortages, continued growth in digital technologies, changing reimbursement models, increasing consumer demand, and the evolving regulatory landscape. One game-changer: Today, nine in 10 American adults use the internet, giving clinicians the capability and flexibility to communicate with and serve health care consumers via the web.

This article explains how virtual health is enabling powerful new ways to connect, offers strategies and steps that health care providers should consider when implementing virtual health programs, and provides examples of virtual care in action.
Virtual health enables continuous, connected care

Virtual health has the capacity to inform, personalize, accelerate, and augment people’s ability to care for one another. Virtual health programs can take many forms. Common applications include:

- Synchronous care to improve patients’ ease of access to providers
- Physician-to-physician communication to improve patient care through information sharing
- Chronic disease management to improve monitoring and alerts for chronic disease patients
- Virtual social work to improve communication and care for underserved populations
- Tele-healthcare to improve patient evaluation and management (e.g., eICU, telepsychology, telestroke)
- Remote patient monitoring to improve providers’ understanding of patients’ health and medical status
- Solicitation and communication of patient-reported outcomes
- Care management processes to increase patients’ understanding of and engagement with their treatment plans
- Patient activation to improve adoption of a care plan, health tracking, and patient accountability
- Care coordination to improve payer/provider relationships

Virtual health is intended to help stakeholders continue work they have already started to improve care delivery and address evolving consumer priorities (see sidebar). Virtual health goes beyond simply enabling video visits or teleconferencing appointments; it can act as a complement to, or even a substitute for, in-person care delivery based on patient population needs, health organization capabilities, and resource availability. Its primary goals are to expand patient and physician access to critical health services; improve clinical outcomes; increase consumer engagement; enhance care coordination; reduce costs, and improve efficiency across the continuum of care (figure 1).

Figure 1. Virtual health enables better patient access to the right level of care at the right time
What do consumers want in a health care experience?

Which elements of consumers’ experiences with the increasingly connected health care ecosystem matter most to them? Deloitte’s recent Consumer Priorities in Health Care Survey challenged consumers to prioritize which interactions are most important. Unlike traditional consumer surveys, in which all interactions may appear important, we asked respondents to rank interactions against each other, prompting consumers to make tradeoffs on which elements of health care they valued the most.

Consumers’ priorities converged into four main clusters of interactions, ranked from the most to the least important:

- Consumers want to be known and understood in order to get a personalized health care experience—providers deliver on this the best.
- Consumers want affordable care with no surprises—this drives their coverage and care choices.
- Consumers want access to care when, where, and how best it suits them; convenience dictates behavior.
- Consumers are looking for tools to help manage their care. Digital tools are increasingly doing this, but they must become easier to use and more connected to make an impact.

Through its ability to share data and content and create personalized interactions remotely, virtual health offers convenient, high-quality access to enhance provider-patient interactions. In addition, virtual health–facilitated robotics and automation can help relieve clinicians of mundane, administrative, or routine tasks, affording them more opportunities to practice at the top of their license.
Building life-centric virtual health programs

When planning and building life-centric virtual health programs, organization leaders should think “strategy, first; technology, second.” An important first step is to define an enterprise-wide virtual health strategy that will help ensure that investments address short-term goals and allow for future scalability. Potential framing questions include: What is the problem we are solving? What is the overarching objective? Which areas of the health system are particularly suited for virtual health? Which patient populations should be targeted? Which technologies should be pursued, and in what order? Which measures can be used to evaluate success in virtual health? What are the potential risks, and how can those risks be mitigated?

When considering technology, it is imperative to think about its potential impact on:

**Patient engagement.** How can virtual health help us differentiate on customer experience and population health management? If we have virtual health offerings, how do we expand/scale them to keep pace with evolving patient expectations?

**Affordability.** How can we extend limited resources and enable sustainability using virtual health capabilities? How do we account for changing demographics and payment models?

**Digital transformation.** How do we ingrain virtual health into the way we operate and deliver care? Are we prepared as an organization to change the way we do business? How can we leverage big data, artificial intelligence, and other digital technologies in existing and new virtual health offerings?

**The craft of medicine.** How do we utilize virtual health to improve physicians’ and other clinicians’ work performance and satisfaction? How do we embed virtual health advances into our clinical research efforts?

In addition, determining critical success factors early in the planning process may help to facilitate effective program implementation and ongoing operations (figure 2).
Virtual health has organizational alignment and buy-in: Program objectives and opportunities are aligned and communicated by leadership across teams (e.g., clinical service lines, patient experience) to establish an enterprise pipeline for opportunity identification and development.

Clinicians are provided appropriate infrastructure for virtual health use: The organization must provide the appropriate technology, data, training/work preparedness, and processes for clinicians to integrate virtual health reliably into their workflows (figure 2).

Virtual health solutions are richly integrated with patient data: Use cases must seamlessly integrate with the organization’s existing electronic health records (EHRs) to ensure patient information is up-to-date and that clinicians are making informed and timely decisions.

Reliability and quality of virtual health technologies instills confidence: Solutions must be reliable and interoperable, and clinicians must have confidence in their quality and the vendors’ experience and support to enable the successful clinician adoption (see sidebar).

Virtual health-based workflows relieve clinician burden: For organizations that choose to incrementally adopt virtual health as a supplement to care, new resource and delivery models should seamlessly integrate into existing clinical workflows and, further, have positive or no impact on physician compensation.

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Focus on value-generation and return on investment

Look at what issues virtual health programs can solve, what assets are needed, the value generated, and whether those programs affect existing brick-and-mortar revenue

Invest early and in evolution

Make agile investments in the future vision now to experience the benefits of being a first mover

Lead with data and analytics

Invest in data analytics, determine key metrics prior to implementing the program, and track metrics to demonstrate tangible benefits

Obtain executive buy-in

Prioritize securing the support of influential executive stakeholders; create a steering committee that sponsors, endorses, and oversees all virtual health programs

Create governance and project management for each initiative

Create separate governance structures for each virtual health initiative, supported by project management team capabilities

Identify the right people for the program team

Hire the right people with the right skills and provide the necessary training to better enable program success

Enable workflow, clinical process design, and integration

Have clinical experts weigh in on clinical process design, workflow design, and overall program integration to drive the most seamless integration

Garner acceptance and adoption from key stakeholders

Actively engage with partner hospitals, clinicians, and other key stakeholders to promote overall buy-in and adoption

Figure 2. Consider critical success factors when planning and implementing a virtual health program
Virtual health in action

Increasing numbers of US health systems are instituting virtual health programs to better serve their patients. Here are a few noteworthy examples:

**Intermountain Healthcare**’s Connect Care service has 35 telehealth programs that provide specialized care throughout Utah. The service connects a provider with a patient who is looking for basic urgent care—to treat the flu or a rash, for example—through a video chat on the patient’s phone, tablet, or computer. The provider can diagnose and create a treatment plan, including ordering prescriptions, if necessary. The same technology that powers Connect Care is also used in Intermountain hospitals to connect providers to other providers, creating a support network that improves patient care. The technology ensures that a patient, no matter where they live, can get the highly specialized care they may need and, whenever possible, avoid being transferred to a bigger hospital.

**Mercy Health**, located in St. Louis, implemented an eICU managing over 400 beds across multiple states and health systems. The organization used advanced analytics and visual technologies to partner with bedside caregivers to remotely monitor and manage patients to enable care that is continuous, interfaced, and algorithm-driven. The eICU identifies patient needs sooner with faster discharge, improving the patient experience. Video visitation enables patients to easily interact with family members, increasing patient satisfaction. The eICU also addresses nursing and physician specialist shortages. The initiative contributed to a 35 percent decrease in length of stays; 30 percent fewer deaths; and $40–50 million in savings.

**Phoenix-based nonprofit Banner Health**, which operates hospitals and other related health entities and services in seven states, has a robust telehealth program. Its specialized services include Banner iCare™, an in-home care delivery model to treat Banner Health Network members with complex, chronic illnesses. Through the use of a tablet-like device, patients interact directly with their health team—primary care physician, pharmacist, nurse, and health coach—to track and address any medical concerns. Banner iCare aims to decrease emergency department visits and hospitalization and increase medication compliance while providing care in the comfort of the patient’s home.

**Sanford Health** patients in Minnesota, North Dakota, or South Dakota can request a physician e-visit through My Sanford Chart. Patients fill out a questionnaire about their symptoms and a provider responds via the chart. The provider may recommend a course of treatment, order a prescription, or request to see the patient in person if the condition is more severe. E-visits are available 24/7 and patients are guaranteed a response within four hours. Sanford also offers video visits. Using a tablet, smartphone, or home computer equipped with internet access and a web camera, a patient can meet face-to-face with the medical team for any acute, nonemergent primary care need, including coughs, colds, rashes, aches, and pains. Finally, Sanford Cancer Center gives patients receiving chemotherapy the ability to stay closer to the comforts of their home with its virtual infusion project. The project, which is supported by a grant from the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services (HHS), is available at infusion centers in three Sanford hospitals. Each center is staffed with oncology-trained nurses, who have immediate access to an expert oncology provider through telehealth technology.

**New Orleans–based Ochsner Health System** has fully integrated its Epic electronic medical record (EMR) with Apple HealthKit and has begun to use the Apple Watch to help manage chronic diseases, starting with hypertension. Through wireless blood pressure cuffs integrated with Apple HealthKit and the EMR, patients regularly measure their blood pressure and heart rate at home. The data are directly sent to the clinic for monitoring, where specialized pharmacists review them in real time to adjust medications and make lifestyle recommendations as needed to ensure good blood pressure control. Results are incorporated into MyOchsner, the system’s online patient portal, so that patients have access to their personal health record and can receive progress reports. Through the Apple Watch, patients also can receive medication reminders, feedback from clinicians about potential side effects when a new medication is prescribed, renewal notifications for prescriptions, and activity tracking and exercise reminders.
Virtual health as a care delivery mainstay

It’s not a question of if, but when virtual health will become a mainstay of a next-generation, patient-focused, digitally enabled health care delivery model. To compete, health systems and other key stakeholders will need to become proficient in virtual health technologies and programs. It also will be important for organizations to focus on getting to their desired future state correctly and safely, not just quickly.

As patients become more engaged, informed, and involved with their health care decisions, and demand better, faster, and real-time access to care, virtual health solutions will play an important role in meeting expectations. While an optimal virtual health program depends on each provider organization’s specific goals, being strategic from the outset can help ensure that the selected path forward supports an enterprise-wide approach and advances ongoing efforts to humanize health care.
Endnotes

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12. https://www.bannerhealth.com/about/innovation/banner-telehealth
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