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TECHNOLOGY

Virtual Health Care Could Save the U.S. Billions Each Year

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The conventional wisdom that the best care is delivered in-person by experienced caregivers may soon be overturned. Rising health care costs, a shortage of physicians, and an aging population are making the traditional model of care increasingly unsustainable. But new uses of virtual health and digital technologies may help the industry manage

these challenges. A number of new technologies are helping to move elements of patient care from medical workers to machines and to patients themselves, allowing health care organizations to reduce costs by reducing labor intensity.

Virtual health refers to the use of enabling technology — such as video, mobile apps, text-based messaging, sensors, and social platforms — to deliver health services in a way that is independent of time or location. We believe uses of virtual health hold potential to boost the capacity of primary care doctors — without adding or training more professionals — at a time when the American Association of Medical Colleges projects a shortage of as many as 40,000 primary care physicians (PCPs) in the next decade.

To explore the impact of virtual health in primary care, an Accenture analysis looked at the economic value of virtual health uses in three common care scenarios: an annual patient visit, ongoing patient management, and self-care. According to Accenture's findings, uses of virtual health in these three scenarios could generate an economic value of approximately $10 billion annually across the U.S. health system over the next few years. Without expanding the primary care workforce, virtual health technologies can augment human activity, expand clinical capacity, and improve efficiency by ushering in a new health care model where machines and patients join doctors in the care delivery team. In the process, patients can become more engaged in their own care, and one-size-fits-all care services will be slowly supplanted by increasingly personalized options — allowing people to choose care on their own terms.

For an annual patient visit, digital technologies can streamline the in-person exam by getting patients' information, collecting symptom data, and identifying potential options prior to the visit. In a typical office visit, much of the physician's time is spent gathering patient history, reviewing the information, considering potential treatment options, and interacting with the patient. It is common for the patient to share information in bits and pieces at different points in the exam, sending the physician through the diagnosis and treatment option cycle multiple times.

Imagine if the patient could provide this prior to the scheduled appointment. For example, Sensely's AI-powered nurse avatar is being piloted at Mayo Clinic and with the UK's NHS to explore potential uses, including interacting with patients, asking them questions about their health, assessing their symptoms, and — when necessary — alerting and feeding data directly to doctors and clinicians.

Such virtual medical assistants often guide the patient through standard intake questions, such as symptoms and family medical history, and analyze the combined information with a diagnostic engine so the physician can consider clinical options prior to the in-person exam. Common consumer devices, such as wearable sensors and biometric devices, would let health care providers automatically gather patient information, along with concerns or discussion items, for the visit. An Accenture analysis shows that streamlining annual patient visits in this way could save PCPs an average of five minutes per encounter and free up 47.8 million hours across the PCP workforce.

An increasingly common alternative to in-person office visits for managing ongoing patient needs is eVisits, clinical exchanges completed through secure messaging in which patients submit information, questions, and images for physician review and response. One area where eVisits can be applied is hypertension management, an area involved in 26% of annual outpatient visits. If each patient has one in-person annual physical and half of the remaining hypertension-focused encounters convert to eVisits, Accenture estimates show this would free up roughly 1.9 million hours across the PCP workforce.

Self-care of chronic conditions is another major area where virtual health can be used to help patients remain medically stable. As an example, adults with diabetes can use sophisticated mobile technology, such as WellDoc and Livongo, to effectively manage their lifestyles and conditions, reducing the need for in-person encounters. Sophisticated analytics can track, trend, and assess patient- and medical device-provided data, such as blood glucose levels. The same technology can prompt and suggest a personalized self-management plan — and that plan can evolve as the patient's health status changes. An

Accenture analysis found that when applying virtual health to just one condition, diabetes care, the clinicians' time that can be released for other uses is equivalent to approximately 11.9 million hours saved across the PCP workforce.

In mental health services, Ireland-based SilverCloud has combined cognitive behavioral therapy and asynchronous care with in-person therapy, to show just how effective smart technology can be in boosting productivity and providing meaningful services — enabling six times more users to receive care. The platform also allows patients to have the option of remaining anonymous, which may help prevent them from avoiding the formal care system due to fear of being stigmatized.

Another example of technology streamlining patient care is in simple tasks like common symptom triage. HealthTap's doctor AI has been "trained" by using knowledge gleaned from half a decade's worth of chats between doctors and patients with common symptom questions. The voice-based application allows patients to get a sharper sense of the urgency of their symptoms without guessing based on an internet search or talking to a nurse or doctor. Patients can seek help from home, without having to wait for an appointment and without sacrificing the personal touch. In addition, less practitioner time is wasted on cases that are not urgent or serious, and providers can redeploy their time to less-routine tasks.

Health care consumers want these changes. They increasingly expect to use digital technologies to control when, where, and how they receive care services. And with that, they are more open to using intelligent technologies, sharing data, and allowing a combination of human and machine to power a new model of health care.

As digital applications proliferate throughout the health care economy, the many benefits they offer will continually improve the industry's performance, efficiency, and outcomes, moving it onto a more sustainable path — one that could better withstand a labor shortage and an aging population while tailoring biology and service experience to markets of one.

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Michael Breen a day ago

A future health system of "men and machines." Agree it won't be stopped and will help consumers. But I also fear unintended consequences e.g. EMR increasing physician rates of depression and burnout. Also hope that med schools will finally seek applicants with skills machines don't have i.e. EQ skills.

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