



BLURRING BOUNDARIES

By Anthony J. Montagnolo

3 advances exemplify a new era for health care

In the 1990s, Jack Welch popularized a phrase to describe what he wanted GE to be: a “boundaryless organization.” That is, he wanted to break down traditional organizational silos and innovate across those boundaries. In today’s health care, “boundaryless” has become a good way to describe the implications of an amazing tidal wave of medical technology now available in new places.

A new era

Each year at ECRI Institute, our team of medical technology researchers scans the technology innovation landscape and puts together a top 10 list of emerging technologies health care leaders should watch. We call the list our Hospital C-suite Watch List to highlight advances that may significantly change the delivery of care. Topics on our 2018 list reflect not only some amazing new advances in their own

right but also show a clear trend that will change health care overall. One could call this trend the era of “boundaryless technology.”

As health technology becomes boundaryless, health care delivery will adapt and become boundaryless, too. More technology is now in people than ever before — hips, knees, spines and hearts gleaming with titanium structural support and microcircuitry machines. More technology now resides on people — everything from hearing aids to exoskeletons. In addition, more technology rides with us as we carry phones loaded with health apps in our pockets and handbags.

This technology evolution enables a new health care mantra: your care everywhere. Not just under the big blue H or in a small exam room at your family physician’s office. Your ability to interact with the health care system will stay with you

and provide access for you and your patients in new places and in new ways.

Digital therapeutics

In September 2017, the Food and Drug Administration granted clearance to the mobile medical app Resnet (Pear Therapeutics) as a prescription-only addition to treatment for substance-use disorders. Resnet is the first digital therapeutic app cleared by the FDA with claims to improve outcomes in the treatment of a disease. Resnet helps patients with treatment adherence as an adjunct to face-to-face clinician time. Given the difficulty of getting personalized in-person counseling set up, this technology can fill a gap in the treatment plan and help patients between counseling sessions. According to the company, patients using Resnet showed statistically significant improvement compared with face-to-face therapy alone.

Although Reset focuses on nonopioid substance misuse, the company now has developed Reset-O for opioid substance misuse.

While not the only company developing apps for substance misuse, Pear provides an example of what may be possible by providing an adjunct to regular therapy. If this type of app works in challenging cases like substance misuse, it seems possible that apps could prove beneficial to patients with other diseases who may need support beyond traditional face-to-face interactions. In effect, by having apps like this immediately available on patients' phones, they have the ability to get "digital" treatment and support 24/7 from the comfort of their homes, or even while sitting on a bench at a local mall.

The implications for trustees: Think about whether your treatment centers could use such technology, but also consider how digital therapeutic apps could help to improve outcomes in other areas of your organization — and even keep patients out of the emergency department or hospital altogether. It is a simple but compelling thesis — better outcomes at lower costs through app-delivered care. Boundaryless connections like this will help your patients receive help more efficiently than ever before.

Genetic testing

Direct-to-consumer genetic testing has begun to build up steam, if for no other reason than it allows people to easily understand their ancestry. As they become more comfortable with the process, a next logical step is to begin to understand how their DNA affects their future, rather than just mapping their past. In addition, the number of genetic tests continues to grow; our understanding of genetic markers continues to increase; and the promise of precision treatments based on genetic profiles looks more promising every day. While such testing is still evolving and can be controversial, there are more companies marketing direct-to-consumer genetic health tests, such as 23andMe's

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health and wellness reports.

Direct-to-consumer genetic testing could have multiple implications for providers: First, it could act as an early steering mechanism for patients both in and possibly out of a hospital's network, particularly for screening services. Providers, therefore, should keep an eye out for opportunities, not just for the evidence supporting the use of these tests but also for any future partnerships these testing companies may make with third-party labs, retail pharmacy chains and other providers.

Second, direct-to-consumer genetic testing may also cause consumer confusion and anxiety. Traditional health providers may need to spend more time educating and helping consumers to understand what they should do with all this new information.

Acuity-adaptable rooms

Acuity-adaptable rooms take advantage of the notion that moving technology and expertise to a patient's bedside may improve safety and outcomes — compared with continually moving him or her to the technology and the clinical expertise. While this notion can be challenging to implement, its elegance has some providers experimenting with keeping patients in one room to deliver all levels of care. Some early evidence suggests promising results — such as good patient outcomes and savings on staffing — at some health systems. Other reviews are mixed because of the drastic changes required in staffing models, infrastructure design and workflow.

Nonetheless, acuity-adaptable rooms have a natural attraction that may lead to refinements in approach as technology and workflow change. For example, as technology and communication systems improve, this trend could pick up speed despite the huge shift in hospital design and caregiver workflow requirements, and make life better for patients. In essence, acuity-adaptable rooms break the boundaries of hospital departments to help improve patient safety and satisfaction. As technological devices continue to become smaller and more mobile, this trend could accelerate and provide a real advantage for organizations in terms of patient outcomes and experience.

Board considerations

Health care technology will continue its inexorable advance, and it will push across traditional health care boundaries as it does. For trustees, the key challenge is to see which technologies will truly disrupt current care models and create new opportunities and new threats, and then to ensure that their institutions respond accordingly. Although this is no easy feat in a time of disruption, some trends are fairly clear nonetheless. Digital apps are providing patients with more care options wherever they go. Genetic testing is becoming more available to everyone from more sources. And experiments in hospital design may demonstrate attractive alternatives for delivering better caregiver workflow and increased patient satisfaction.

To stay ahead of the technology evolution, trustees should make sure their organizations are (1) assessing these advances locally in their service area, and in a systematic way; (2) conducting pilot projects in all three areas to learn what works and what does not; and (3) seeking out smart partnerships to share risk and accelerate learning. Though the future is always difficult to predict, it is equally true that the status quo only lasts so long. So, do not overstay your welcome. And go break some boundaries. **T**

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To read ECRI Institute's "2018 Top 10 Hospital C-suite Watch List," visit www.ecri.org/2018watchlist.