



JUMPSTARTING INNOVATION

HealthTrust member hospitals and other industry leaders are embracing and investing in innovation as a strategy for improving patient care, increasing patient satisfaction and easing common healthcare headaches



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—**Anna Marie Butrie**, vice president, innovation program and services, Trinity Health

Virtual reality headsets aren't just for video gamers. At Alder Hey Children's Hospital in Liverpool, England, surgeons have begun using virtual reality (VR) headsets to prepare for complicated heart surgeries on very small hearts.

Traditionally, they were unable to fully understand a child's heart problem until they started operating because images rendered on CT and MRI scans are so small. But VR technology uses those scans to produce a virtual heart they can study prior to surgery.

“Standing inside a virtual heart 8 feet high while operating a virtual torch to examine for defects has been one of the highlights of my innovation career so far,” says **Iain Hennessey**, M.D., head of innovations at Alder Hey. “The ability to accurately assess the miniature detail of a sick child's heart, using advanced 3D visuals, has the potential to reduce the number of exploratory surgeries and operation times.”

Technological improvements of this caliber hold great promise for healthcare innovation, with opportunities to develop or improve medical devices, diagnostics and mobile health platforms, as well as clinical workflows and processes. And ongoing innovation is vital to the provision of better, more reliable care at affordable prices.

“In Liverpool, 120 years ago, 50 percent of children did not survive to see their 10th birthday,” says Hennessey, the featured speaker at the 2017 HealthTrust Innovation Summit, held in October in Ponte Vedra Beach, Florida. “Today, that number is

almost nothing, thanks to 120 years of continuous innovation. We cannot stand still until that number is zero.”

At all hospitals, today's healthcare challenges demand new ways of approaching patient care—and those that are focused on innovation are seeing positive results. “Our goal is to become the national leader in improving the health of our communities and each person we serve, and to be the most trusted health partner for life,” says **Anna Marie Butrie**, vice president of the innovation program at Livonia, Michigan-based Trinity Health. “We recognize that to achieve our vision and put our people-centered strategy into action, innovative models of care need to be implemented as we move from volume to value.”

CONSIDER ALL OPTIONS

Healthcare innovation is a hot topic, with numerous technology companies and entrepreneurs developing new tools and techniques to address clinical and workforce issues. Many hospital teams also have their own ideas for solving specific challenges.

When it comes to innovation at Alder Hey, “we use any and all means,” Hennessey says. “Sometimes it begins with a [startup] company [offering a new product], sometimes the clinical need. We often craft innovation around one patient or experience. The best relationships can come from the most unlikely places.”

At Nashville, Tennessee-based HCA Healthcare, the innovation team works closely with physician and nursing teams, and information technology staff, to find potential problems and develop

solutions. “There’s so much innovation going on in healthcare that we also bring in outside solutions to see how they might fit here,” says **Chip Blaufuss**, assistant vice president of strategic innovation at HCA Healthcare.

The Mayo Clinic’s Center for Innovation works directly with senior Mayo Clinic leaders to create solutions that will help achieve strategic priorities. Individual projects may originate with staff at the dedicated center or with anyone else in Mayo’s system who seeks the center’s help in solving a problem or developing a new idea.

Many successful healthcare innovations involve a good deal of collaboration. For instance, Trinity Health recently challenged colleagues and external organizations to submit proposals for reducing the readmission rate for dual-eligible beneficiaries of Medicare and Medicaid. The health system is now conducting pilot projects at Trinity Health facilities around some of the submitted suggestions.

MEETING COMPLEX NEEDS

Hospitals and healthcare partnerships continue to unveil innovations that help meet needs on multiple fronts, most notably the way care gets delivered to patients. Among the positive effects:

— Increased patient satisfaction —

At the Mayo Clinic, the department of obstetrics and gynecology collaborated with the Center for Innovation to develop the “OB Nest,” a new way for pregnant women and their families to experience prenatal care. Traditionally, prenatal care consists of 12–14 doctor visits, most of which are brief check-ins. While research shows that fewer visits are fine for healthy patients, previous attempts to reduce the number of visits resulted in lower patient satisfaction scores.

OB Nest, designed specifically for women with low-risk pregnancies, overcame this hurdle, freeing up doctors’ time for sicker patients while leading to higher patient satisfaction scores and perceived value. In a pilot study, participants were assigned a nurse as their lead contact, scheduled for eight office visits—with an option to add more—and provided with home monitoring equipment so they could check their baby’s fetal heart rate and their own maternal blood pressure whenever they wanted. The mothers-to-be could also opt to participate in an online community with other participants and nurses.

AmSurg, which owns and operates more than 250 ambulatory surgery centers throughout the United States, implemented “Patient Connect,” an engagement program focused on communicating promptly with patients. The program consists of a



web platform (and will eventually include a mobile app), through which patients can obtain procedure results, better understand risks associated with pathological findings and schedule follow-up procedures, if needed. The platform directly links the patient to available procedure times for appointment scheduling, says **Eric Thrailkill**, vice president and chief information officer for AmSurg.

At HCA, leaders understand that patients and their family members often have difficulty getting around a hospital campus. Since most people are familiar with Google Maps’ blue dot navigation, HCA incorporated it into a new wayfinding mobile app. Developed with the help of an outside provider, the app shows users their current location on the hospital campus. Users can also input their destination, such as the nursery, for step-by-step directions to get there.

“Blue dot wayfinding was our answer to how we could bring technology from outside healthcare into our organization and help people get around better, improving the patient and family experience,” Blaufuss adds. The system has been deployed at one hospital with plans to expand in the near future.

— Improved patient care and safety —

Pediatric orthopedic surgeons at Alder Hey use a 3D print hub to provide printed models of patients’ spines for preoperative planning and as a reference to guide them through complex spinal procedures. An outside partner converts CT scan images of a patient’s spine into a 3D printable format, which then allows a sterilized, life-size model of that spine to be printed and used in the operating room.

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At Trinity Health, a hospital is piloting a program originally created by John Hopkins to help aging patients safely stay in their own homes longer. Community Aging in Place, Advancing Better Living for Elders (aka CAPABLE) deploys a three-person team to participants' homes to improve their functional abilities and reduce avoidable readmissions, Butrie says. The team includes an RN, an occupational therapist and a licensed handyman who work with the clients to implement small adjustments that will keep them living in their homes independently, such as installing bathtub rails or shelving.

Gregory Brown, M.D., Ph.D., an orthopedic surgeon at St. Joseph Medical Center in Tacoma, Washington, and orthopedic service line medical director for HealthTrust, developed a predictive analytics tool for patients considering total knee replacement surgery. It's a simple red-yellow-green matrix that quickly shows patients if they're likely to have a poor, good or excellent surgical outcome and their potential risk of infection.

— *Enhanced nursing workflows* —

HCA has begun providing nurses with mobile devices and innovative apps that make it easier to access information and communicate with physicians and other nurses. Now, HCA is also working with nurses to identify opportunities to increase the functionality of the phones in the course of their daily work. For instance, nurses might use mobile apps to administer medications,

manage phlebotomy, or capture images of wounds to get input and insight from other care providers.

“Our goal is to improve their access to timely and actionable information as well as to their ability to connect with their colleagues, while putting them in a position to spend more time at the bedside, doing what they’ve been trained to do,” Blaufuss says.

COMPETITIVE NECESSITY

A continuing focus on innovation is, for many hospitals, translating into promising new ways to provide better healthcare, more efficiently serve patients and, ultimately, drive more positive outcomes. The critical factor, notes Butrie, is aligning the activity with the organization's strategic objectives. Hospitals are also likely to succeed with innovation when they foster a creative culture that is open to risk, and encourage staff to think about new ways to approach routine tasks.

“The process of identifying new solutions to problems that patients and clinicians face every day allows us to stay competitive and provide high quality, cost-effective care,” Blaufuss agrees. “If we’re not figuring out how to improve the care we provide, we’re going to fall behind others who are doing that.” **S**

Members can download HealthTrust's latest executive briefing, “*Innovation in Healthcare: Current State & Future Needs*,” from the Clinical Evidence section of the HealthTrust member portal.