HOW TECHNOLOGY CAN REVOLUTIONIZE OUTCOMES-BASED CARE

HOSPITAL ROOM TVS HAVE BECOME INTERACTIVE PORTALS TO A BETTER PATIENT EXPERIENCE

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Sometimes, big changes in how we work and live are driven by technology. Think smartphones, for example. At other times, social change and technological innovation dovetail perfectly to help us reimagine what we do.

In healthcare, over the last decade, the focus on outcomes-based care has coincided perfectly with advances in network-based communication to open a new world of patient experience solutions that produce results for hospitals and the public. And with the coronavirus pandemic upending various aspects of healthcare delivery, this new breed of solutions, built on a foundation of secure, integrated networks and smart digital devices, can help healthcare providers meet the challenge.

"This idea of better providing services to patients, helping them stay informed and engaged during the course of their stay — educated about why they're there, how they can get services and, ultimately, empowering them to be active participants in their care — has become the foundation of our software development," explains Robin Cavanaugh, Chief Technology Officer at GetWellNetwork, a Bethesda, Maryland-based company that offers

a family of solutions, including GetWell Inpatient, which creates personalized, digital workflows to engage patients in their care. "We've found innovative ways to deliver that experience on devices in the hospital environment."

Chief among those devices is the in-room television. Along with the ubiquitous pillow speaker, the hospital TV tends to become the center of a patient's world during a hospital stay. Until recently, the TV was a one-way entertainment medium. Today, it's a smart, networked internet display capable of much more:

entertainment, for sure, but also personalized education, information, interaction, and — increasingly — face-to-face communication.

"For so long, you've had this old TV mounted in the corner, offering little information and keeping patients somewhat disconnected from everything around them," Cavanaugh says. "We've spent a lot of time trying to improve that experience, first by deploying capabilities in set-top boxes and now by aggressively integrating networked patient solutions into a new breed of smart TVs."
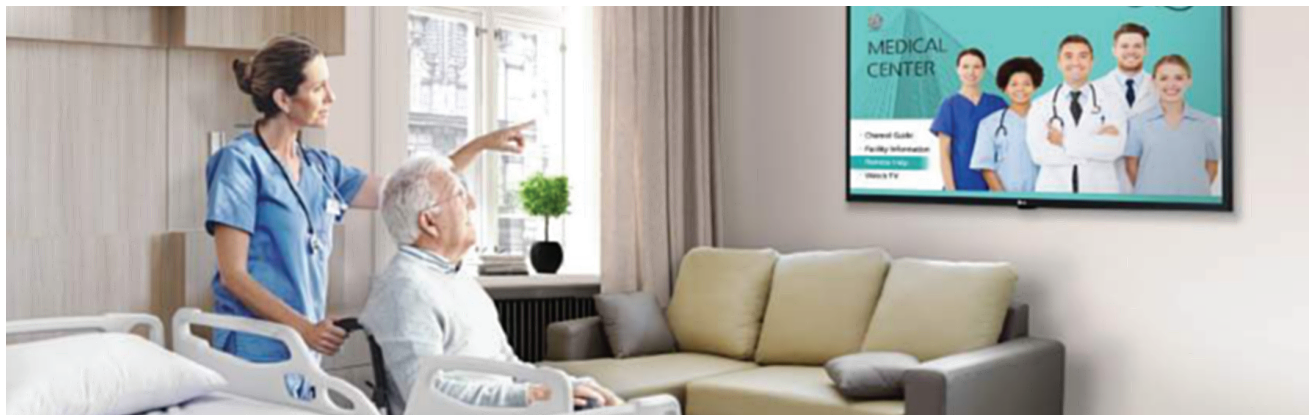
SMART TVS SUPPORT A VARIETY OF HEALTHCARE SOLUTIONS

Smart TVs combine a traditional TV display with a built-in computing device and network connection. This all-in-one design makes them more reliable and manageable. "They eliminate external TV components, so they're easy to install in rooms," says Dennis Mathur, Senior Vice President of Technology at Boston-based Aceso, developer of digital solutions for delivering personalized content and services to patients. "For installation, all that smart TVs need is a network connection. At the same time, they integrate with important in-room devices, such as pillow speakers."

Companies like Aceso, GetWellNetwork, MDM Healthcare, Sonifi Health, TeleHealth Services and TVR pCare have reinvented the patient experience using the tried-and-true television system as a healthcare portal. Their comprehensive offerings vary, but when a healthcare provider has the right information technology infrastructure in place and a network of smart TVs — securely integrated with electronic medical records (EMR) and other systems — each solution can deliver a variety of patient amenities in support of outcomes-based care, including:

ENTERTAINMENT

As people have come to expect at home, in hotels, and elsewhere, today's smart hospital TVs can deliver a variety of on-demand entertainment, helping patients relax and potentially boosting satisfaction marks on HCAHPS surveys. And because they're flexible, they can also support legacy entertainment systems. "If a facility only has a coax cable system, or a hybrid environment with both coax and IP, we can leverage technologies that predate smart TVs and bridge that gap between what the smart TV can do and what its predecessors were capable of," says Bob Gruenwald, Director of Technical Operations at Los Angeles-based SONIFI Health.

EDUCATION

Because smart TVs are effectively internet devices, they're able to reach back into hospital IT systems and software platforms to deliver educational content tailored to patients and their care plans. "Our solution is very data-driven," says Mark Cortina, Chief Technology Officer of New York-based pCare, which offers a comprehensive interactive patient system. "By tying into the hospital systems, the pCare solution can see all the patient orders — pharmacy, radiology and others — and act intelligently. For example, as care is provided, an education intervention is triggered and content is automatically sent to the patient's smart TV in real-time." After a patient watches suggested content, it can be automatically documented in their EMR. If they don't watch, a message can appear on the TV encouraging the patient to take action.

REAL-TIME COMMUNICATION

Because the solution knows who the patient is and why they're in the hospital, it provides a platform for ongoing communication. "While the patient is watching a show, information can overlay on top of the program, telling them, 'It's time to take your medication now. The nurse will be in shortly,'" explains Cavanaugh. "Or a message can appear saying, 'You received pain meds a couple hours ago. How are you feeling now?' and the TV prompts the patient to rate their pain through the system." The goal is to better monitor a patient's experience and take real-time action to ensure their stay has a positive outcome.

PATIENT COMFORT

Smart TVs and interactive patient systems can also be integrated with building management automation systems so patients can control their in-room environments — another way of boosting satisfaction and comfort. "We have environmental control interfaces that allow the patients to control the temperature, shades and lighting of their environment," says Gruenwald. And, in the interest of mitigating light and noise issues which can be problematic for hospitals at night, smart TV systems can turn themselves off when not being watched. "We have an app that runs every night during quiet times, sending a message out to the TV and asking [the patient] 'The TV is on, are you still watching TV?'" explains Cortina. "If they don't answer, we turn the TV off automatically. If the TV remains on, we lower the volume to a specified maximum level for night time."

ACCESS TO HOSPITAL SERVICES

Smart TVs running patient engagement software can be programmed to accomplish a variety of tasks. "We have the ability to let patients order meals on-screen, tailored to their diets," says Mathur. "Based on the EMR and dietary system, they only see on the smart TV a menu of items they can eat or drink." And increasingly, in-room smart TVs can support virtual visits from hospital staff. "We've created a module (Tele-Nurse) within our interactive platform to provide on-demand virtual nurse sessions to a patient," explains Hassan Sharif, Technology Director at Cary, North Carolina-based TeleHealth Services, which designs and installs hospital display systems and offers its TigrPX interactive patient platform. "That ability to interface with a healthcare provider from the TV is seen as very valuable, especially now during the COVID crisis."

A HOLISTIC, DIGITAL PATIENT EXPERIENCE

Patient experience solutions aren't confined to in-room TVs. These platforms can also support content and communications on digital signage throughout a facility; on digital versions of the in-room white board, where patients and healthcare providers can easily post and update information about treatment; on small, electronic signs outside the room; and increasingly, on the mobile devices of patients and their family.

Technology providers continue to innovate patient experience delivery over these platforms, based largely on the goals of healthcare providers. MDM

Healthcare, based in Ponte Vedra Beach, Florida, has taken its Journey PX patient experience solution and deployed it in a HIPPA-compliant cloud, offering hospitals a flexible way to build a system, especially if their budget and technology infrastructure are limited. "It's important, especially with COVID-19, to be able to provide more content outside the hospital," says Themis Koumoutseas, MDM Healthcare's Vice President of Technical Operations. "With a solution like this, hospitals can improve patient satisfaction and reduce readmissions."

Every provider's goals might be different, which is why all these solutions can be tailored to deliver the needed outcomes. A pervasive smart TV infrastructure helps make it possible.

"We take all the feedback we get from the healthcare systems we work in and share them with our technology provider," says GetWellNetwork's Cavanaugh. GetWellNetwork, Aceso, MDM Healthcare, Sonifi Health, TeleHealth Services and TVR pCare are systems integration partners of LG Electronics USA, working collectively to improve patient outcomes through greater engagement. "These hospitals are spending time and money to create an environment that is welcoming and conducive to healing, as well as aesthetically pleasing. The TV is central to that effort."

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