5 High-Tech Fixes for Patients

Health advances more easily reveal causes of illness, cost of care faster

By [LAURA LANDRO](http://topics.wsj.com/person/A/biography/1402)

From virtual doctor visits to online diagnoses, information technology is rapidly changing the way patients interact with the health system. Here are some innovations that are catching on more broadly and could improve care in 2014:

Monitor Long-Distance

An electronic intensive-care unit, or eICU, lets critical-care doctors and nurses check on patients in several hospitals from a remote command center with a bank of monitors displaying patients' vital signs. They can alert bedside staff if they see a subtle change in a patient that could signal a worsening condition. Remote monitoring by specialists is also catching on for emergency rooms and surgical units to help evaluate patients with stroke, seizures and other conditions.

Patients in a hospital with an eICU program were 26% more likely to survive their stay and were discharged 20% faster than those receiving usual ICU care, according to a study published earlier in December in the journal CHEST. The study analyzed some 120,000 patients in 56 ICUs over five years.

Video cameras can be activated if the remote team needs to visually check the patient, and can be used to check regularly on patients who might be at risk for falls, according to Brian Rosenfeld, an inventor of the eICU technology and chief medical officer for telehealth at Philips Healthcare, a unit of Dutch technology giant Royal Philips that purchased his company in 2008. As more evidence of its benefits has emerged, resistance among some critical-care doctors to having a remote doctor looking over their shoulder has dissipated, he says, but some "still think they are delivering perfect care and no one can help them."

The eICU helps especially in rural areas where there can be a shortage of specialists. Phoenix-based hospital-and-health system Banner Health currently monitors and supports more than 450 ICU beds across several Western states from command centers in Mesa, Ariz., and Greeley, Colo., and even uses some doctors in a Tel Aviv, Israel, center to cover shifts.

Crowdsource an Ailment

Patients can crowdsource their symptoms to find a diagnosis. As strange as it sounds, health experts say this may hold promise. On a new website, CrowdMed.com, patients who haven't been able to get a firm diagnosis can post their symptoms online to crowdsource an answer.

Founded by technology entrepreneur Jared Heyman after his sister Carly went three years with an undiagnosed illness, CrowdMed lets users offer a cash reward that goes directly to the "medical detectives"—be they laypeople or physicians—who help solve their case. Medical detectives may suggest a diagnosis and bet points on others' suggestions. Each diagnosis is treated as a stock with a share price that moves based on "demand" for the diagnosis. CrowdMed uses an algorithm to calculate the probability of each diagnosis being correct according to betting behavior, ranks the diagnoses from most to least likely, and presents the patient with the top 3 to 6. The average reward on the site is currently $200, the company says. Detectives split the rewards based on how many points they bet on the correct diagnosis.

Mr. Heyman says the idea isn't to replace doctors, but to come up with a list of possibilities a doctor might not have considered. Before the site launched, doctors diagnosed his sister with a disorder that includes early menopause symptoms. CrowdMed used her case to test the system later and within three weeks it was diagnosed correctly.

Luke Hoelscher, 31, recently posted his case on CrowdMed.com, after what he describes as several frustrating years of going from doctor to doctor with undiagnosed symptoms that included blurry vision, severe light sensitivity, bodily pain, and fatigue. He is offering a $500 reward. A former software engineer who can no longer work due to his health issues, Mr. Hoelscher says he has yet to find an answer through the site, but is optimistic. "There have to be people out there who have dealt with what I am dealing with," he says.

CrowdMed, along with increasingly sophisticated online "symptom checker" programs for consumers, allow patients to use some of the same strategies that doctors are already turning to for help with difficult cases. Some doctors participate in private, online social networks to seek input from other physicians and use Web-based programs that analyze reams of data to suggest possible diagnoses.

Consult Via Video

Hospitals, insurers and health systems are increasingly allowing patients to make an appointment online or consult a physician via video chat. Insurer [Cigna](http://online.wsj.com/public/quotes/main.html?type=djn&symbol=CI), [CI +1.00%](http://online.wsj.com/public/quotes/main.html?type=djn&symbol=CI?mod=inlineTicker)for example, recently teamed up with Sunrise, Fla.-based MDLive to allow some health-plan members to schedule a virtual consultation with a doctor for nonemergency situations such as allergies and sinus infections.

In a pilot program, Mercy Health in Cincinnati has offered patients at two of its medical practices electronic visits. Patients complete an online survey specific to certain conditions, such as sore throat or headache and a doctor responds within 24 hours determining next steps such as calling in a prescription, or recommending rest. Physicians can attend to the electronic visits in between seeing other patients in the office. A spokeswoman says Mercy requests a $35 copay for these visits and about 10% of health plans cover the visits. Patient surveys indicated that even if the payer didn't cover the visit, she adds, patients would be willing to pay out of pocket for the service because of its convenience – such as no need to miss work, or arrange for childcare.

Sharecare, an online health-and-wellness site whose founders include celebrity doctor Mehmet Oz, recently launched AskMD, an app that collects information about symptoms, locates doctors, filters results by insurance, specialty and distance and directs users to the nearest emergency room if it looks like they need one. Hospital Corp. of America, a major hospital chain, is a sponsor of the launch, and some of its affiliated doctors and hospitals will be featured.

Text a Nurse

When Valerie Weichart, 56, was hospitalized recently for back surgery at St. Rita's Medical Center in Lima, Ohio, she was provided with a tablet device. It allowed her to view her medical chart and lab-test results, read up on her medications, see bios and photos of the staff caring for her, and text a nurse for help. St. Rita's parent, Catholic Health Partners, aims to roll out the system to its 23 hospitals after having completed a successful pilot. The system, called MyChartBedside, is linked to patients' electronic medical records. Patients can also use the device to surf the Web and play games.

"I felt more comfortable knowing what my medications were, so I didn't have to ask so many questions," Ms. Weichart says.

NewYork-Presbyterian Hospital also has been testing arming patients with tablets. "We worried at first about how nurses would adjust to it, but they really like it," says hospital chief executive Steven Corwin. The units are quieter without the ring of call buttons. The messaging system makes it easier for nurses to prioritize patient needs and requests. And patients are more fully engaged in their own care, Dr. Corwin says.

Calculate the Cost of Care

With the coming changes in insurance coverage, calculating copayments and other out-of-pocket costs could be daunting. Insurers and health plans are offering cost estimates online and through mobile apps that calculate how much patients will have to pay out of pocket, how much a plan will pay, and available in-network reduced rates. UnitedHealthcare's myHealthcare Cost Estimator, launched last year, recently added inpatient hospital information including knee replacement, childbirth, and spinal surgery. The costs can vary widely. For example, the company says, childbirth, including prenatal and postnatal care can range from $9,699 to $29,076 in the New York City area. In a survey of its users, 67% said the calculator gave them the confidence to make better cost choices.