



S. Harvey Price is editor of *For Your Advantage*. A health care industry strategist based in Boca Raton, Fla., Mr. Price has worked as an independent consultant since 1971. His clients are community hospitals, hospital systems and major corporations.

About FYA

FYA – *For Your Advantage*, is a free twice-monthly newsletter published by TrendLeader Connections.

With every issue, FYA provides insights into the topics that concern healthcare leaders today and the challenges that will be faced in the near future.

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TrendLeader Connections
406-586-8775
www.ForYourAdvantage.com

Telemedicine – The Next Generation

Dr. Michael Davis, sitting at what looks like a helm on the bridge of a starship, places a pair of headphones over his ears. On the flat-panel screen in front of him, a nurse presses the end of a stethoscope against a prison inmate's chest. Loud and clear, the drumming rhythm of his heart pulses across the network, covering the 70 miles between Richmond and Galveston in, literally, a heartbeat.

Doctors such as Davis at the University of Texas Medical Branch have used telemedicine for years to treat patients far away in the Texas prison system, corporate clients, rural Texans and even researchers in Antarctica – all without leaving their hometown.

Davis and the other doctors who manage and use the medical branch's Electronic Health Network envision wider applications for the technology that had roots in the 1960s but, until the last decade, was still largely relegated to the realm of science fiction.

Obstacles remain. Patients tend to like to have their doctors close by and insurance companies are still skeptical about potential cost savings.

But as telemedicine technology gets smaller, cheaper and more refined, the government and insurers are paying close attention.

The potential of the technology ranges from chronic disease management – easy, in-home monitoring of patients to prevent expensive trips to the emergency room – to robotic surgeries controlled by physicians half a world away.

"The future of telehealth depends less on technology than it does politics: telecommunications laws, privacy laws, insurance reimbursement, licensure," said Will Engle, director of the Association of Telehealth Service Providers, an international group based in Portland, OR.

Progress In Prisons

When an inmate in any Texas prison unit needs medical services beyond what an on-site primary care physician can provide, a medical branch specialist is just a teleconference away.

Multiple videoconferencing screens allow both the patient and doctor to see themselves and each other. The patient can zoom in on the doctor's face, where expressions can speak volumes. And the doctor can see how his own face appears to the patient, a plus when delivering bad news, for example.

Self-adjusting cameras provide far better definition than the Web cam

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Telemedicine – The Next Generation (Continued...)

you'll find at an electronics store, and they allow doctors to see the entire room, or a section of skin as large as a deck of cards.

With its 30 to 40 telemedicine studios, the medical branch was on pace to conduct 70,000 patient visits in 2007. During each visit, a registered nurse, emergency medical technician or other licensed medical professional was by the patient's side to help the doctor assess the patient.

Obstacles

Many private insurers won't reimburse for telemedicine visits. But some states, including Texas, have passed laws requiring reimbursement just as if the consultations were face-to-face.

"I think insurance companies are just sort of conservative when it comes to looking at new policies," Engle said. "They've been waiting for the evidence to mount up that there are cost savings."

Healthcare providers and the telecommunications industry are aggressively seeking to provide such evidence.

A 2001 report to Congress by the U.S. Department of Health and Human Services said that, while a few small studies demonstrated cost savings from telemedicine, the benefits haven't been systematically evaluated on a large scale.

A 2007 study, funded partly by AT&T and released in November by Boston-based Partners Healthcare System, found that nationwide use of telemedicine systems in emergency rooms, prisons, nursing homes and doctors' offices could save \$4.28 billion annually.

The study was also funded by the AT&T Center for Telehealth Research and Policy at the medical branch and by grants from the Dallas-based O'Donnell Foundation and the Galveston-based Kempner Fund.

Besides convincing insurance companies, telemedicine advocates will have to ease fears about malpractice liability and licensure problems.

In many cases, doctors can't legally treat patients across state lines using telemedicine.

In California, state investigators charged a Colorado doctor with a felony after he prescribed antidepressants over the Internet to a teenager in California. The teenager later killed himself.

In 2007, an appeals court ruled the state was within its rights to prosecute an out-of-state doctor for practicing in California without a license, even without setting foot in California.

On the other hand, patient satisfaction and worries about extending the technology to rural areas are proving to be less of a problem than some thought.

Surveys routinely show patients are satisfied with the quality of telemedicine visits versus face-to-face encounters, especially when they would have had to travel far to reach a doctor.

And the federal government is dishing out more money to extend high-bandwidth telecommunications to rural areas specifically for telemedicine. In 2007, the Federal Communications Commission announced a three-year, \$417 million program to help rural healthcare groups build high-speed networks. The program includes roughly 6,000 hospitals, research centers and clinics in hard-to-reach places.

All of which may mean that the waiting room will one day be brought to your living room.

"You'll have access over the Internet," said Dr. Oscar Boultinghouse, chief medical officer of the network at the medical branch. "You'll have a set-top box, and we'll be channel 500 on your cable."

This article first appeared, in a longer form, in the Galveston County Daily News. It was written by Mark Collette.

New Healthcare Quality Report

By Rick Kneipper, Chief Administrative Officer and Co-Founder of PHNS

The recently released *National Healthcare Quality Report* by the Agency for Healthcare Research and Quality (AHRQ) for 2007 is a must read – even though it's a daunting 136 pages long.

The good news is that the AHRQ report finds that the "quality of healthcare in our Nation continues to improve." But the bad news is that it found that "the rate of improvement in core measures appears to be slowing" to an annual rate of only 1.5 percent, down from 2.3 percent for 1994-2005.

The bright spots in the report are very encouraging. The report found that 27 of 41 core measures improved, and only six declined. For example, the rate of improvement in heart disease treatment increased from 3.3 percent to 5.6 percent.

Also encouraging is the conclusion that the geographic disparities in healthcare quality across the U.S. are generally decreasing. For example, "the percentage of heart attack patients who were counseled to quit smoking has increased from 42.7 percent in 2000-2001 to 90.9 percent in 2005," and 48 of our 50 States, Puerto Rico and the District of Columbia all scored above 80 percent on this.

But there is still much to be done. In 2000, "diabetic patients in the worst performing State versus the best performing State were admitted to

the hospital 7.6 times more often with their diabetes out of control. By 2004, this difference had doubled to 14." In order to dramatize the effect of this, the report states that if "all States had reached the level of the top four best performing States, at least 39,000 fewer patients would have been admitted for uncontrolled diabetes in 2004, with a potential cost savings of \$216.7 million." And better quality care obviously would've significantly reduced the adverse consequences for those diabetes patients.

The AHRQ report also found that chronic care nursing home residents were restrained 10 times more frequently in the worst performing State compared to the best performing State, which is up from 8.3 times – and if all States had reached the average of the best performing State, then at least 61,500 fewer residents would have been physically restrained nationwide.

The report "documents important progress in making patients' lives better" – but there is much yet to do, and we owe it to the patients to be improving healthcare quality much faster across the entire country.



I would like to hear your comments.
Send them to:
Richard.Kneipper@phns.com



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Some Bureaucracies Last Forever

The next time you experience frustration in your efforts to bring about change. Remember the following history lesson from one of our readers and you may feel better.

The U.S. standard railroad gauge (the distance between the rails) is 4 feet, 8.5 inches. That's an exceedingly odd number.

Why was that gauge used? Because that's the way they built them in England, and English companies built the first U.S. railroad cars. When U.S. manufacturers got into the business they, maintained the same specifications

Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used.

Why did 'they' use that gauge then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Why did the wagons have that particular odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts.

So who built those old rutted roads? Imperial Rome built the first long distance roads in Europe (and England) for their legions. The same roads have been used ever since.

And the ruts in the roads? Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome, they were all alike in the matter of wheel spacing. Therefore, the United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot. Bureaucracies live forever.

So the next time you are handed a Specification/ Procedure/Process and wonder "What horse's 'posterior' came up with it, you may be exactly right. Imperial Roman Army chariots were made just wide enough to accommodate the rear ends of two war horses. (Two horses' posteriors.)"

Now, the twist to the story; or as Paul Harvey might say, here's the rest of the story:

When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs. The SRBs are made by Thiokol at their factory in Utah. The engineers who designed the SRBs would have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through tunnels in mountains, and the SRBs had to fit through those tunnels. The tunnels are slightly wider than the railroad track, and the railroad track, as you now know, is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's behind.

This anecdote was fact checked. Not all the details could be corroborated, but they were generally considered plausible.

About



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