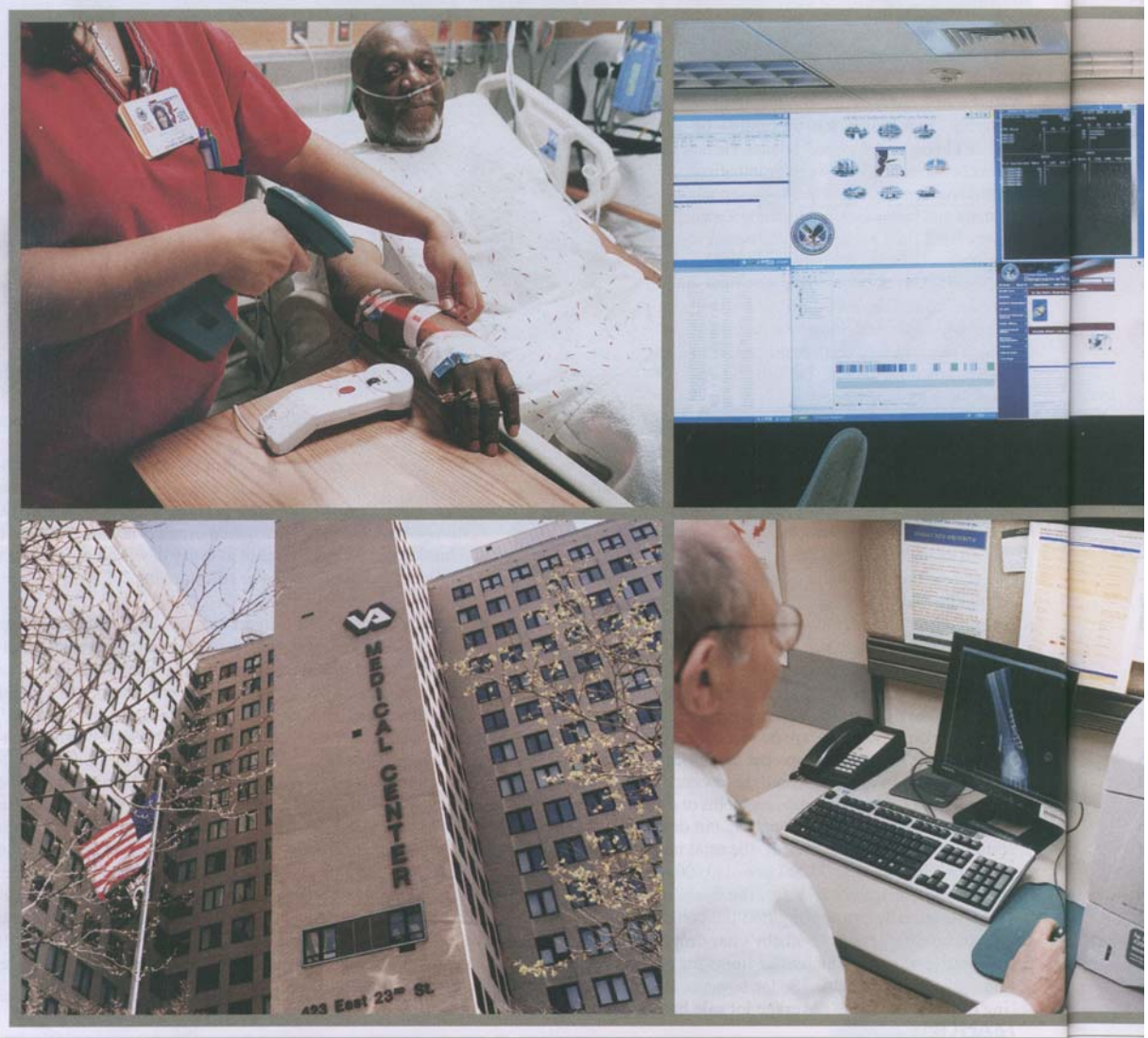
TECH Rx

HOW THE VA HE



F Which companies will benefit from the massive changes rolling health care? David Stires has some hot prospects, exclusively on fortune.com.

EALED ITSELF

Veterans' hospitals used to be a byword for second-rate care or worse. Now they're national leaders in efficiency and quality. What cured them? A large dose of technology. BY DAVID STIRES

An avuncular man with a gravelly voice, Dr. Michael Simberkoff, 69, fires up his computer. With a keystroke, he's on a page that lists a patient's complete health record, including office visits, drug prescriptions, and lab tests. "Absolutely everything is available," says the chief of staff at the Manhattan campus of the VA New York Harbor Health Care System. Up pops a reminder telling him the patient—a 44-year-old diabetic—is due to have an eye exam. Simberkoff dispatches the man to the eye clinic on the second floor, where an ophthalmologist administers the test. An alert soon flashes on Simberkoff's screen saying the exam has been completed.

PICTURES OF HOPE
A VA hospital in Manhattan (lower left, then clockwise); bar-coding a vet; the servers that serve those who served; and Dr. Simberkoff at work

On the 11th floor, nurse Lumara Romero is using the same computer network to make sure she's giving the right medication to a 60-year-old patient with high blood pressure. With a handheld device, she scans a bar-coded bracelet on her patient's wrist and then a bar code on the drug's bottle. A nearby computer linked to the hospital pharmacy confirms that she's giving the right drug to the right patient.

In the Tele-Health unit on the sixth floor, nurse Maggie Kong-Lopez is reading the vital statistics of a 57-year-old patient in Queens, sent to her computer via a Telebuddy that the VA has rigged at his home. Today the news is worrisome: The patient, who is suffering from heart disease, has gained three pounds overnight, indicating that he's retaining fluids. After a few quick phone calls to the patient and his doctor, she tells him to double his diuretic medication today. "We caught him before his condition got worse," she says with satisfaction.

The seamless integration of science, information, and compassion is the dream of modern health care. Scenes like these are not fantasies, however, but daily realities at the Veterans Health Administration, the federal agency that is the most wired and cost-effective health system in the land. By making medical information both more centralized and easier to access, wiring health facilities can reduce the errors that the Institute of Medicine, a nonprofit research group that is part of the National Academy of Sciences, says cause at least 44,000 deaths a year. A national health-information network could also save $140 billion a year, estimates the U.S. Department of Health and Human Services.

Just don't expect that to happen anytime soon. For a $1.9 trillion industry (16% of GDP), medicine

PHOTOGRAPHS BY LISA KERESZI

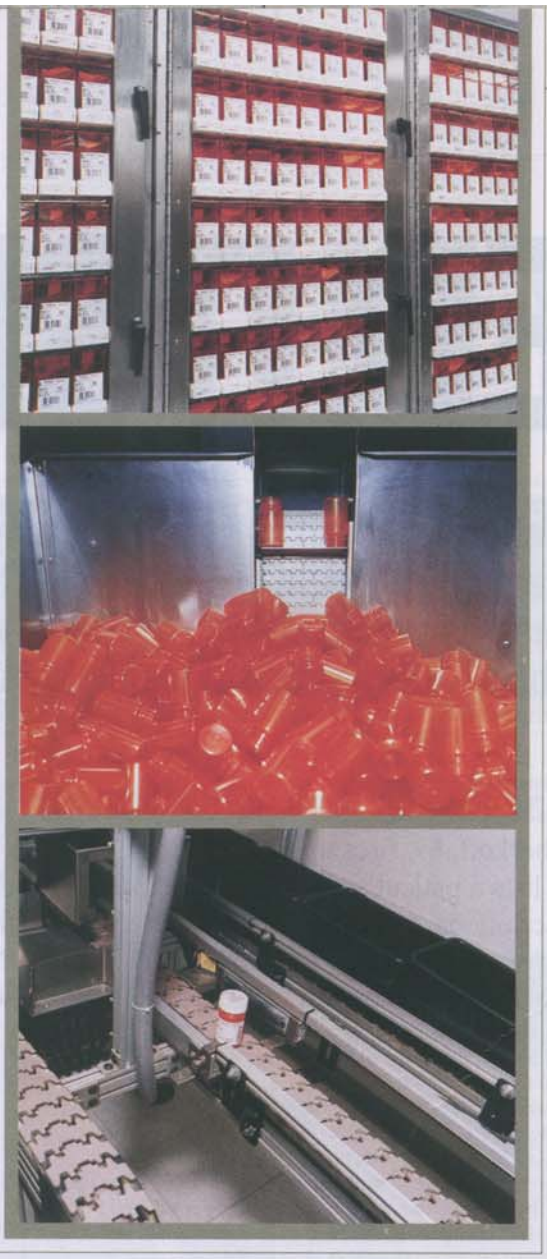
remains stubbornly backward. Some 90% of the estimated 30 billion health-care transactions done each year in the U.S. still occur by phone, fax, or mail. In part this is because the nation's 700,000 doctors and 5,700 hospitals each collect data in their own way; that makes it difficult to share information. And at $20 million a pop, the price to implement a state-of-the-art IT system is out of range for most U.S. hospitals, a third of which operate in the red.

But the promise of a paperless information system is being realized in some corners of health care. There's the Indiana Heart Hospital in Indianapolis, PeaceHealth in Bellevue, Wash. —and the VA. The veterans' health system is the one that stands out because for much of its history it was considered a treacherous backwater offering below-par care in substandard facilities. A low point came in 1992 when the decomposed bodies of three missing patients were found near a military hospital in Salem, Va., a discovery that triggered a federal probe that uncovered lax oversight at several facilities. The VA's poor reputation even seeped into pop culture. In the 1989 film *Born on the Fourth of July*, Tom Cruise, who plays a wounded Vietnam vet languishing in a wretched facility in the Bronx, shouts, "This place is a fuckin' slum!"

Today the VA health system —which provides lifetime medical care to veterans with service-related disabilities, as well as to low-income and other qualifying vets and their families— has turned that reputation around. The nation's largest health network, with 1,300 hospitals, community clinics, and other facilities, the VA beats most other medical providers on dozens of "quality indicators," such as administering regular cancer screenings or prescribing beta-blockers to heart-attack survivors.

Tech is at the heart of the transformation. A networked software program— dubbed Vista—runs a powerful electronic medical record-keeping system that acts as the VA's brain. Through Vista, doctors submit prescriptions electronically, minimizing errors that stem from illegible handwriting. They are notified when their patient needs a flu shot, a chest X-ray, or other follow-up care. (In a pilot program, many vets also get reminders over home computers.)

The improved care at the VA hasn't been lost on veterans. This year the agency expects to treat 5.4 million patients, up sharply from the 2.9 million people it treated a decade ago. Customer satisfaction with the veterans' health system, as measured by the University of Michigan, has exceeded that for private health care in each of the past six years. "The care is second to none," says Tom Bock, national commander of the American Legion, the nation's largest veterans' organization.



HOW PILLS POP UP
At the Manhattan VA, an automated prescription system finds the drug (top) fills the prescription, and labels and distributes it.

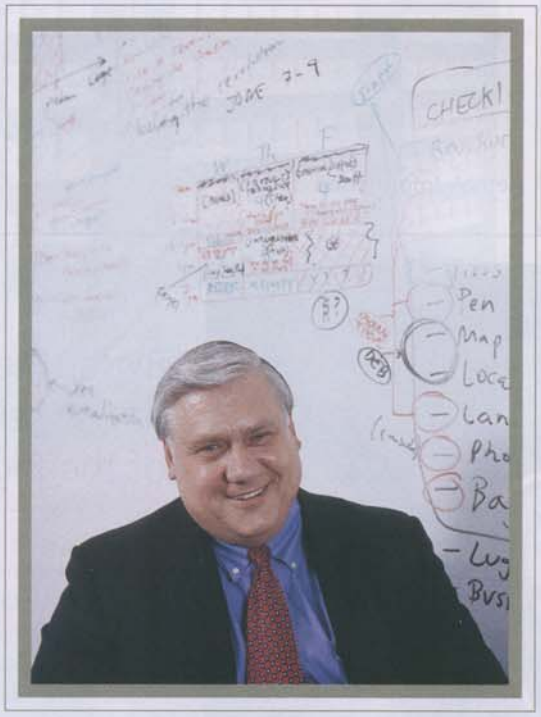
What's more, the VA has achieved all this while containing costs. As more vets have come in the door, the agency's overall budget has nearly doubled since 1996, to $30 billion. But the cost per patient has held steady at roughly $5,000. Over the same period, total health spending for the average American shot up more than 60%, to $6,300. "We are providing veterans with more effective, more efficient, and more compassionate care," concludes Jonathan Perlin, undersecretary for health at the VA since April 2005.

The agency's new capabilities proved vital after Hurricane Katrina, which destroyed the paper records of untold thousands. But Vista's electronic health records meant that VA physicians could treat the vets who showed up at their doors as if they had known them all along: Every patient's health record was there at the touch of a few keystrokes. "It showed in a vivid way the value of having an electronic medical record wherever you are," says Jim Nicholson, secretary of the Department of Veterans Affairs.

The VA isn't perfect. While the agency now outranks other providers on most quality measures, it generally scores in the 70th to 80th percentiles, so there's room for improvement. And some vets complain that the increased demand is causing un-

reasonable delays for appointments. Still, the VA's experience shatters one of the great myths of medicine—that improving care always requires spending more money.

By using tech to practice preventive medicine and reduce unnecessary doctor visits, the VA has proved that quality can actually save money. "The VA turns the paradigm on its head," says Margaret O'Kane, president of the National Committee for Quality Assurance, a private nonprofit that accredits health organizations based on various performance measures. "It shows that better quality pays."



THE HEALER
Ken Kizer saw the opportunities that tech could bring—and took 'em.

How did the VA do it? Enter the forceful outsider determined to shake up an entrenched bureaucracy: Kenneth W. Kizer. A former Navy diver, emergency medicine physician, and top health official in California, Kizer, 54, became the VA's undersecretary for health in 1994. By any measure, the veterans' health system was sick. Veterans' groups attacked its quality of care. Government auditors called it bloated. Some even questioned its existence. But Kizer was intrigued: "I thought that it had great potential," he says.

What struck him most was how poorly the agency was using its resources. Only 10% of patients had primary-care physicians. That meant vets—many of whom suffer from chronic conditions such as heart disease and emphysema—had to see a different specialist for each ailment rather than getting everything treated at one time. Furthermore, there was no standardized approach for doctors to follow in treating a chronic illness. Fewer than a third of all patients, for example, were receiving flu shots and other critical immunizations. "Too many patients were falling through the cracks," Kizer says.

The good news was that everyone agreed that the system needed radical treatment. Soon after taking over, Kizer summoned a dozen top managers for a weeklong brainstorming session in Washington. They decided to carve the country into a dozen territories, each with its own budget, managers, and performance goals. Every patient got a primary-care doctor. And over the next several years the agency shifted away from an expensive, hospital-based model to one that emphasized outpatient community clinics and primary care.

One of the keys to Kizer's efforts was a deal he negotiated early on with the Office of Management and Budget that returned any savings to the VA. Kizer began bargaining hard with drug companies and other medical suppliers, wringing out hundreds of millions in annual costs.

As part of the overhaul, he reengineered the VA's $1-billion-a-year pharmacy, creating a single list of approved medications. To free up pharmacists and to reduce errors, each hospital pharmacy installed systems to automatically refill prescriptions. Today, at the Manhattan VA, the robotlike Optifill system dispenses 1,000 prescriptions a day.

Kizer then used the savings from these changes to create Vista's electronic health record. Vista's origins date back to the 1970s, long before programs to help doctors treat patients were commercially available. The agency's programmers began designing applications to help schedule appointments, track lab results, and perform other routine tasks. By 1989 the VA had some two dozen applications installed at 169 sites nationwide.

Sensing the potential of Vista, Kizer spent hundreds of millions rewiring hospitals and purchasing new computers, allowing distant facilities to talk to one another over speedy connections. VA programmers added dozens of new software programs to the growing suite of applications. By 1999, Kizer and his team had installed Vista at every VA facility in the country. Today the numbers prove how the attention to detail that technology can provide pays off in better health. The VA's pneumonia vaccination rate, lagging at 29% in 1995, has risen to become an industry-leading 94% in 2005. The number of at-risk vets screened for cervical cancer has increased from 64% in 1995 to 91%. The increased vaccination rate has reduced hospital admissions by 4,000 patients per year.

Kizer also encouraged creative think-

"The single most important thing" to improve American health care, says Kenneth Kizer, "is to widely implement electronic health records."

DUNCAN STEWART

ing. During a monthly meeting with his top managers in 1998, a VA staffer mentioned a project at the medical center in Topeka that had reduced medication errors 70% by using bar-code scanners to match patients, drugs, and doctors' orders. Sue Kinnick, a longtime nurse at the hospital, had conceived the idea after watching a car-rental agent wield a wireless bar-code scanner to check in her car. Intrigued, Kizer hopped on a flight to Topeka, liked what he saw, and decided to install the technology. By September 2000 the system was operating in every VA hospital.

By 1999 the VA system was clearly on the mend. The number of patients reached 3.5 million that year, up from 2.8 million in 1994. Kizer had cut more than half of the 52,000 hospital beds in order to open 300 new community clinics, helping the agency treat 700,000 more patients.

While Kizer won praise from staffers for improving the quality of care, the changes also stirred politically potent groups such as the Paralyzed Veterans of America (PVA), who were upset over bed reductions at medical centers devoted to spinal cord injuries. "Dr. Kizer's reforms are undermining the quality of specialized care," blasted the PVA's executive director, Gordon Mansfield, in testimony before the Senate Committee on Veterans Affairs in 1998.

A year later Kizer's renomination was blocked. He resigned and took a job as CEO of the National Quality Forum, a Washington nonprofit working to promote a national set of performance standards. Although Kizer thinks he could have been renominated if he'd made the right concessions, ultimately, he says, "I wasn't willing to compromise." Fortunately, the three leaders who have succeeded Kizer have built on his momentum; the VA has continued to improve.

In his 2004 State of the Union address, President Bush noted that "by computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care." In April of that year he pledged to make interoperable electronic health records available for most Americans within ten years. Three months later he named David Brailer to be the first national coordinator for health information technology. In July 2004, Brailer unveiled a plan for achieving this goal.

Almost two years on, though, there is still no national standard, and in late April, Brailer resigned to spend more time with his family. Creating a nationwide system for sharing medical information is likely to cost tens of billions just to get started. Yet only $111 million has been allocated this year to fund small pilot projects. England, by comparison, has allocated more than $10 billion and Canada about $2 billion to start similar initiatives.

Ken Kizer, for one, is not waiting. Last December he became CEO of Medsphere Systems, a tech outfit based in Aliso Viejo, Calif., with $3.5 million in annual sales. His goal is to take Vista to the masses. The company was founded in 2002 by Scott and Steve Shreeve, brothers who became Vista converts during training stints at VA hospitals as medical students. When they found out that Vista is an "open source" program that's available for no charge over the Internet, they used a Freedom of Information Act request to get the code from the government and launched Medsphere. For a fee, Medsphere installs a proprietary version of Vista—called OpenVista—and provides round-the-clock customer support.

Kizer is in for a hard slog. He concedes that many hospital executives are reluctant to put their patients' lives in the hands of "a nascent startup with a disruptive technology." And big companies such as General Electric, McKesson, and Cerner all offer their own computerized clinical systems with electronic health records. So far Medsphere has about six customers, including Midland Memorial Hospital in Texas, that are offering OpenVista at 60 facilities. But by targeting smaller community hospitals that can ill afford the expensive systems from the big boys, Kizer believes that Medsphere can get a toehold in a market that could transform health care one facility at a time.

"The single most important thing that can be done to improve the quality, safety, and efficiency of health care today is to widely implement electronic health records," he says. "It's just the right thing to do." F

REPORTER ASSOCIATE *Eugenia Levenson*
FEEDBACK *dstires@fortunemail.com*

SLOW PROGRESS

The U.S. private sector is finally injecting a healthy dose of tech.

Cardinal Health
The Pyxis MedStation uses electronic tracking to help nurses and pharmacists accurately dispense medicine, reduce errors, and manage inventory.

The "cubie" drawer of the Pyxis MedStation 3000 stores drugs.

MedMined
An Alabama pilot program used MedMined's data-mining service to reduce hospital-acquired infection rates by 19% and save $5 million. The service is now operating in six states.

Kaiser Permanente
KP HealthConnect is the largest civilian electronic health-record initiative, with nearly six million members.

UnitedHealth is testing smart ID cards that will let providers access medical histories with a quick swipe. — *Eugenia Levenson*

The VA's recent experience shatters one of the great myths of U.S. medical reform—that improving care always requires spending more money.