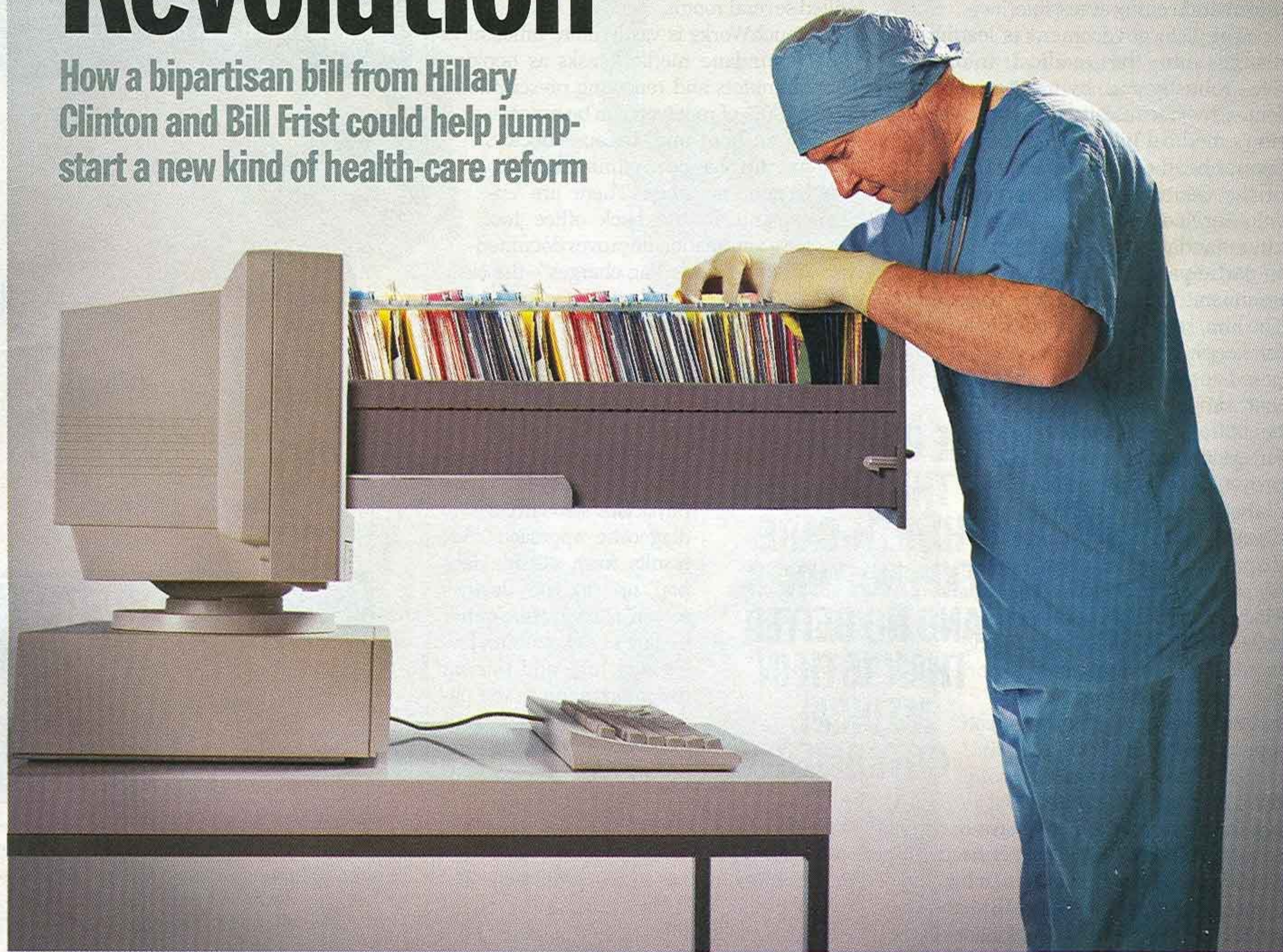


The e-Health Revolution

How a bipartisan bill from Hillary Clinton and Bill Frist could help jump-start a new kind of health-care reform



By **BILL SAPORITO**

ONCE BEFORE IN HIS ENTREPRENEURIAL career, Glen Tullman was standing at the threshold when technology transformed an industry. In the '90s, he helped figure out a system that allowed insurance claims to be recorded and processed on computers, not paper. It made him a bundle.

Now Tullman heads Allscripts Health-care Solutions, which sells a product that lets doctors run a paperless medical practice—including booking appointments online and

creating e-prescriptions and, most important, collecting X rays, lab results and medical histories in one database, accessible to physicians and patients. He thinks he's on the doorstep of another transformation. "There is less penetration of information technology in health care than any other major industry," says Tullman. "Someone has said the advent of electronic health records will be as significant as the discovery of penicillin."

It's medicine that the health-care system needs desperately. Backed by the Bush Administration, prodded by employers and under pressure to contain costs and improve service, the medical community is finally—

and rapidly—plugging into the new world of electronic health records, in which your personal health information shows up wherever you do—at your doctor's office, the emergency room, the MRI machine, even your home. "Resistance is at an all-time low," says Neal Patterson, CEO of Cerner, an e-health company based in Kansas City, Mo. Cerner and Allscripts are racking up quarter after quarter of double-digit sales growth.

Underscoring the new urgency to shift to e-health was the joint press conference held in Washington last week by Senators Hillary Clinton and Bill Frist, two potential presidential candidates who otherwise rare-

ly get near enough to pass a communicable disease. They've got together, however, to introduce legislation that would provide seed money for local health networks and eliminate the biggest hurdle to beaming medical records to where they are needed: the lack of interoperability among the myriad systems now in use. Medical record keeping in the U.S. is in the "Dark Ages," Clinton complained. "We need to have the information easily accessible."

The U.S. government is leading this charge into the medical information age—robustly and, by most accounts, effectively—because it pays 46% of the nation's medical bills. Dr. Mark McClellan, former head of the FDA and now director of the Centers for Medicare and Medicaid Services, is making paperless medicine mandatory for physicians who want to participate in the agency's potentially remunerative pay-for-performance scheme. The aim, sensibly enough, is to pay doctors for keeping their patients healthy, as opposed to the current fee-for-service basis that simply rewards patient throughput. A priority for McClellan is to improve the treatment of diabetes and other chronic diseases, which absorb a disproportionate amount of health-care dollars. That requires better data collection—uploading and monitoring information from glucose meters, for instance—and more communication with patients.

"McClellan has made it clear. They are not going to pay the same whether you leave horizontal or vertical," says Dr. Don Rucker, head of Siemens Medical Solutions, one of a handful of large corporations, including IBM and General Electric, that are betting billions on the market for health-information technology.

Driving all this are some frightening statistics. The U.S. is No. 1 in the world in terms of health-care expenditures—a total of \$1.8 trillion last year and rising at a rate more than twice as fast as our incomes—yet it ranked no better than 16th in a study of 22 industrialized countries in what medical professionals call outcomes. That's in part because so much of the care delivered is unnecessary—as much as one-third, according to a Dartmouth study—and in part because of the inefficiency of a system in which tens of thousands of patients die each year as a result of medical errors.

"We have to do this; there is no other

choice," says Dr. Alan Wasserman, president of Medical Faculty Associates (MFA), a 270-doctor practice affiliated with George Washington University Hospital in Washington that happens to treat many members of Congress. MFA recently converted to a system made by Allscripts called TouchWorks. Before the conversion, the practice employed 23 people whose sole function was to collect, store and maintain paper files that filled several rooms.

TouchWorks is vastly more efficient at such mundane medical tasks as booking appointments and renewing prescriptions. About 90% of renewals can be processed within an hour and, because doctors' handwriting has been eliminated, with far greater accuracy. There are enhancements in the back office too. Because automation improves documentation, the group's "lag charges"—the cash tied up in the fee-collection process—have dropped to \$1.5 million from \$2 million. MFA gets paid in 63 days on average, as opposed to 102 days before TouchWorks.

At the heart of the TouchWorks system is its "tasking engine," a piece of software modeled after physicians' standard 10-step diagnostic approach. Test results from outside labs pop up on the doctor's screen, allowing him or her to plot, say, cholesterol levels over time and present the information to the patient. If a physician writes a script, the system will flag possible interactions with other drugs the patient is

taking or question dosing levels that are out of the norm.

Automation has also created what Dr. Ryan Bosch, who directed MFA's TouchWorks project, calls stickier patients, borrowing an Internet measure of loyalty. "I spend less time gathering information and more time being proactive," he says. "Delivering good-quality health care is about a relationship."

It's not surprising that a big urban practice such as Bosch's would get wired. Most health care in the U.S., however, is delivered by small practices with fewer than 10 doctors, and these physicians don't yet see any payoff. That's because so far there is none. The cost is high, about \$10,000 to \$12,000 per doctor, and most of the benefits accrue to other players in the system, such as hospitals, employers and insurers. Doctors in small practices, many experts believe, won't

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**HOW TO GET YOUR
MEDICAL INFO TO
GO WITH YOU ...**

Portable, accessible records are the key to increasing the quality of care and minimizing errors in the paper trail. In some places, regional health information organizations link patients and local providers. Elsewhere, medical groups are setting up their own websites, and patients are creating personal health records that can be shared with their doctors



▲ ... in your pocket

At some practices, patients can get the results of physicals and EKGs and other data loaded onto a so-called thumb drive that plugs into a PC. Records can be updated on visits to specialists and beamed to other doctors



▲ ... in your wallet

At iHealthRecord.com, run by Medem, you can download personal information such as allergies, previous surgeries, chronic conditions and the drugs you are taking onto a smart card. If you are ever hit by a bus in a strange city, this card could save your life

link up unless their patients demand it. At least that's the assumption behind a company called Medem, which introduced a website in May called iHealthRecord.com. The site lets you store all your family's medical information—prescriptions, allergies, health histories, etc.—and share them with physicians, as long as the doctors are on the system. You can also download vital information onto a smart card to carry with you. The software is free; Medem charges doctors who

E-DOC GW's Bosch takes notes on an Allscripts system. His group once had 23 clerks just to handle paper files

MICHAEL J. N. BOWLES FOR TIME

of the legal protections. Even Newt Gingrich, a longtime champion of health-care reform, sees the need for updated legislation to protect medical privacy as technology evolves. But, he adds, it's important to keep the relative risks in perspective. Should you get into a car wreck, he says, "if you're an absolute privacy addict you can always say, 'I'd rather die.'" Identity, in fact, could be a far bigger issue than security, given the vast number of Americans with common names such as Smith, Sanchez and Lee.

The growth of regional health information organizations (RHIOs) is another step at dispelling the Big Brother scare. Although only a few RHIOs are operating, some 500 locally controlled information networks are being built, and the Clinton-Frist bill would put money on the table to help get more of them up and running. In New York's Hudson Valley, the Taconic Health Information Network and Community serves 600,000 patients along with area doctors, hospitals, labs, pharmacies, insurers, employers and consumers. If a resident makes an emergency-room visit on a Saturday, the ER doc can pull the patient's records from his personal physician.

The bottom line is that better health care may not happen in the U.S. without better health-care information technology. Sooner or later all of us will probably be carrying around our medical history in a key-ring device or an ATM-type card or maybe even a surgically implanted chip. The benefits could be extraordinary. IBM sees opportunities to apply massive computing power to help doctors make diagnoses and treatment decisions. New standard practices could be com-

municated to doctors within months rather than 15 years, the current lag between discovery and practice. Pharmaceutical companies with access to anonymous health data could improve and speed up drug development. There may even be a buck or two in it for consumers from what has been called information liquidity: If you want access to my data, pay me. Best of all, we could finally throw away those damned clipboards. ■

... to your home computer

Websites such as WebMD and iHealthRecord.com let you manage your family's health history. You can gather and store information and then share it with any physician who is part of the program

... to your doctor's office

Using tablet PCs and exam templates, physicians can enter all the data they once wrote out by hand, leaving more quality time to spend with you. Later, you can review your records via your doctor's website

get the benefit of the record keeping. Linked to insurers, these so-called personal-health-record systems could also pave the way for "mouse calls," arrangements by which doctors can consult patients over the Net for a fee. "It's so much better than our main competition," says Medem CEO Ed Fotsch, referring to the data-collection device still used by the vast majority of doctors: the clipboard.

There are risks involved in computer-

izing anything, of course. Privacy advocates are especially concerned that once patient records are online, it will be that much easier for sensitive information to fall into the hands of, say, insurance companies or potential employers. "It's not about being scared of technology; it's about the appropriate safeguards," says Marc Rotenberg, executive director of the Electronic Privacy Information Center. To Rotenberg, the push to automate is running way ahead