

Doctors Advised to Keep Records Electronically

Technology Could Prevent Errors, Report Says

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The Institute of Medicine yesterday called for hospitals and physicians to adopt electronic record-keeping systems that would prevent tens of thousands of fatal medical errors a year and form the basis for a nationwide flow of patient information among practitioners and medical facilities.

The government would set the standards for electronic records and error-surveillance systems but would not tell hospitals and clinics what to buy.

Use of such systems, which can guide treatment decisions as well as catch mistakes, would be voluntary, said the institute, which advises the federal government on medical policy. Over time, however, electronic record-keeping and participation in a national information network should become conditions for participating in programs such as Medicare, making them essentially mandatory.

The "health information infrastructure" envisioned by the 16 authors of the report would give the government an unprecedented role in day-to-day medical practice.

The government would set the technical standards for information exchange, define medical errors and tell hospitals what information to collect about them. It would also help specify what type of "decision support" computer systems should offer to physicians as they order tests, diagnose illnesses and devise treatments. It would oversee the "root-cause analysis" of errors and near misses, similar to what is now done in the airline industry, and disseminate information about lessons and fixes.

The system would also spin a much larger and more seamless web for disease surveillance, which could be helpful in detecting or responding to biological terrorism. It would allow a practitioner in South Dakota to read the clinic notes and X-ray reports of a patient once treated in New York -- and to report an adverse drug reaction to the Food and Drug Administration, all from a personal computer.

"I think we're laying the interstate highway system for electronic health information," said Paul C. Tang, a physician and informatics scientist at the Palo Alto Medical Foundation, who headed the panel that wrote the 228-page report.

Reports from the Institute of Medicine, which is part of the congressionally chartered National Academy of Sciences, have no legal force but can be hugely influential. A report four years ago that estimated at least 44,000 Americans -- and possibly as many as 98,000 -- die of medical errors each year riveted national attention on a subject that academic researchers had been trying to get the public to notice for years. The new report, called "Patient Safety: Achieving a New

Standard of Care," was conceived as a first big step in solving the problems laid out in the earlier document, "To Err is Human."

Under the proposal, many federal agencies would take on new responsibilities, notably the Agency for Healthcare Research and Quality and the National Library of Medicine, as well as several committees in the Defense and Veterans Affairs departments that are already at work standardizing information flow among themselves.

But the report's authors -- who included doctors, a nurse, information scientists and health policy experts -- took pains to say they proposed a "public-private partnership." The government's role would be to speed up and make more efficient something that many medical systems are desperately trying to do anyway -- drag themselves out of the Dark Ages of unreadable and untraceable paper records and into a future of information-at-a-keystroke.

If implemented, the report would mark a historic milestone in American medicine by attempting to capture the safety-and-quality benefits of a national health care system without actually creating one.

"Health care is the most information-intensive enterprise in the country. It is 20, 30, 40 years behind less information-intensive industries like banking. . . . We need a Manhattan Project for health care information, and we need people at very high levels to understand this," said Kenneth W. Kizer, head of the National Quality Forum. The Washington nonprofit organization helps hospital and medical systems devise ways to measure and monitor the quality of care.

The first step, the panel said, is adoption of an "electronic health record" that gives practitioners immediate access to patient information from all sources and alerts them to impending disasters, such as drug interactions and dangerously abnormal lab results. About 10 percent of physicians' offices, and even fewer hospitals, now use electronic medical records exclusively.

By linking lab, pharmacy and doctor's notes, electronic systems can automatically look for signs of problems in a patient's care, such as a transfer from a ward bed to the intensive care unit or the administration of an antidote to a drug. Electronic systems can provide advice as well as warnings, suggesting, for example, that a doctor prescribe a beta-blocker drug to a patient being discharged after a heart attack. A study published this year reported that American adults now receive the recommended care only 55 percent of the time.

Errors of omission "are probably bigger, much bigger" problem than errors of commission that get most attention, Tang said.