

Making automation viable. The efficiency potential of electronic transactions has never been in doubt, but lack of standards for those transactions has typically added to the cost and complexity of performing what should be simple actions, experts say.

Setting up any kind of computer system to communicate with payers is a costly proposition, says Howe, who used to direct software implementation as a health care information systems consultant to hospitals. Financial forms used in patient accounting were different from payer to payer. "It took weeks of effort to set up all the payer forms, because they all had to be set up individually and tested individually," Howe says.

Financial forms in their multiple variations add 30% to 40% to the cost of installing a patient accounting system, an expense that would be unnecessary if the financial claim form were the same for all payers and didn't have to be customized during installation, he says. "It should come set up already from the vendor."

Obtaining eligibility information also is a bigger chore than need be because of slightly different formats required by each payer, Hullender says. For the 20% of patients who did get checked for eligibility at Cape Fear Valley before its electronic makeover, workers had to go to separate computer terminals to submit inquiries to Medicare, Medicaid, Blue Cross and CHAMPUS, the Civilian Health and Medical Program of the Uniformed Services. Other plans had to be contacted by phone.

The separate Blue Cross terminals are still there, but eligibility information from the other payers now is requested and received uniformly through a link with Healthcare Data Exchange Corp., a Malvern, Pa.-based company that manages electronic data interchange between payers and providers. The eligibility process, integrated into the hospital's admission/discharge/transfer information system, is triggered when a patient is registered, and the retrieved details are automatically inserted into the proper place in the electronic form being filled out, Hullender says.

Cape Fear Valley's claims streamlining efforts began long before going electronic. In 1995 the hospital identified every person, task, report or piece of paper associated with the billing process and came up with a grand total of 170 steps from start to finish.

Of those, managers were able to eliminate 117 steps that for one reason or another did not have to happen, Hullender says. And some of the remaining steps being handled by an overqualified employee were delegated to a lower-paid worker, which reduced the overall cost of producing a claim, he says.

The reduction in manual work, combined with electronic claims processing, freed workers to be reassigned to collections and follow-up of accounts that needed special attention. Those accounts, Hullender says, previously would have been assigned to an outside collection agency at high commission rates.

Pushing ahead. Administrative simplification isn't the only area in which electronic data exchange can make an impact on operations, experts emphasize.

As health care organizations seek to harness options such as the Internet to enhance clinical operations, they'll have to satisfy clinicians and consumers that the data sent to and from remote locations is secure and in the right hands, says Howe of eHealth Ventures.

Internet-based clinical information systems are coming on the market with security features that address those concerns. An electronic medical record marketed by eHealth Ventures includes encryption, authentication of physician identities, audit trails to track every action online and a means of telling patients how their information collected within a hospital is being used externally, Howe says.

Those capabilities are among the mandatory security and confidentiality requirements listed in proposed HIPAA regu-



lations. But to customers of eHealth Ventures such as Lourdes Hospital, the Internet-based medical record application was prized mainly as a service for physicians and an administrative tool, says Wood, the hospital system's chief information officer.

The outpatient-focused facility staffs only about 200 of its 389 licensed beds, but it has a large home-care business in western Kentucky and is expanding into southern Illinois. It also has a spread-out dialysis operation, with one clinic on the hospital campus and three others in different counties.

A paper-based records system was staffing-intensive and impractical for such a far-flung, decentralized business. Lourdes wanted to reduce the size of the staff handling recordkeeping and billing while at the same time making records more available to physicians operating in the expansive service area. "HIPAA was not even on my mind," Wood says. "My purpose (in installing the electronic system) was to get rid of the paper and get something in here for the physicians that would make their lives easier."

For less than \$300,000 in licensing and installation costs, Lourdes physicians who are connected in a virtual private network can see records remotely and sign charts online in their offices or from home, he says. Changes made to patient records are updated in less than 24 hours. In the medical records department, 37 employees do the work that 43 did before the online record was established.

The compliance aspect was a bonus. "When this HIPAA thing came around, we started realizing it was going to fulfill some of the regulations that were coming down," Wood says. O