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### Special Series: DM and Chronic Care

Part 1 of 2

**Disease management: Health care's ultimate promise or fading fad?**

Clinicians view disease management as the best way to implement proven methods of delivering good patient care. The familiar mechanisms of case management and utilization review blend into the disease management model. But don't mistake it for a cost-containment strategy. Nor does it work in every health care delivery setting. Then, there's the ethical quandary when providers get cozy with commercial groups who promote their own product use by offering databases and consultants. . . . . cover

### Special Report: Technology Boom

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**Electronic bar-code tracking beats manual records systems**

The University of Iowa Hospitals and Clinics use bar coding to keep up with 1.23 million active patient records. Retrieval rates are better than 99%. Average record retrieval time for emergency cases is 30 minutes. Even as electronic medical records replace charts, however, one expert explains that we'll never completely get over our reliance on paper — and the need for paper tracking systems. . . . . 5

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**JANUARY 2000**  
VOL. 10, NO. 1 (pages 1-12)  
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### DM and Chronic Care (Part 1 of 2)

## Is disease management the future of health care or a fad past its prime?

*Clinicians see DM as good medicine but are wary*

**D**isease management (DM) gets lot of press these days. At best, it combines a number of powerful tools into a pattern of integrated care, especially for the chronically ill. In its less savory form, it channels cash to groups that, some believe, already take more than their share. If used as intended, it's unlikely to reduce costs, at least within the next quarter or even the next year, according to clinicians such as **Thomas Bodenheimer**, MD, a general internist and professor at the University of California at San Francisco's School of Medicine. "It's wishful thinking that disease management is going to save a lot of money for anyone, except perhaps in managing congestive heart failure," he contends. "With diabetes, osteoporosis, and depression, we will not save money in the short term. That's why some people say disease management is going down in popularity already."

## Key Points

- Clinicians regard disease management (DM) as health care at its best, especially for patients with chronic diseases.
- DM is not to be mistaken for a cost-reduction strategy. With the exception of a few conditions such as asthma or congestive heart failure, it may increase costs for several years.
- To fulfill the promise of excellence, experts insist that DM must be clinician-controlled.

Continued from cover page

**Speech recognition software speeds X-ray record turnaround**

Voice-driven computer programs may solve the seemingly perpetual delays in patient records completion as well as physician resistance to computer data entry. At LDS Hospital, radiology reports are ready in 20 minutes. The technology is improving rapidly, but is better suited to office-based documentation than to mobile functions on nursing units . . . . . 7

**Looking at the healing power of words**

**To heal more, clinicians can learn to listen more**

Time spent on patients' concerns early in the visit enables the clinician to work faster later. To prevent last-minute surprises, ask the patient to explain the whole agenda upfront. 'Difficult' patients are often less so when the clinician applies interpersonal problem-solving skills . . . . . 9

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If you know when to tell people what they'll gain or lose, you can take some of the mystery out of crafting persuasive print messages. 'Gain-framing' works best when inviting people to engage in preventive behaviors. Conversely, 'loss-framing' can persuade readers to take comparatively small risks to head off potentially greater, even disastrous problems in the future . . . . . 11

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The cost savings of lighter anesthesia for surgical patients depends on the type of staff compensation. For hourly wage arrangements, the practice can save overtime expenses. For set salaries, cost savings per se do not accrue. However, when patients wake and go home sooner, it frees staff to do other work . . . . . 12

**COMING IN FUTURE ISSUES**

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- HMO quality may depend on where you live
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Still, we'd best not dismiss it, cautions Bodenheimer. "Quality people should be very interested in it. We need better chronic disease care. Quality improvement often deals with acute things like drug errors — and that's a terrible problem to be sure. But every day, year after year, diabetics are running around with high blood sugars. It's a silent problem that doesn't show up on the quality assurance charts. But eventually, it shows up as severe complications."

Basically, DM is nothing new. It's a comprehensive, coordinated package of care, especially critical to those suffering from chronic illnesses. The definition, for this discussion, is drawn from a recent article by two experts (**David Bernard, MD, and Maulik Joshi, MHSA**) who also shared insights with *QI/TQM*:

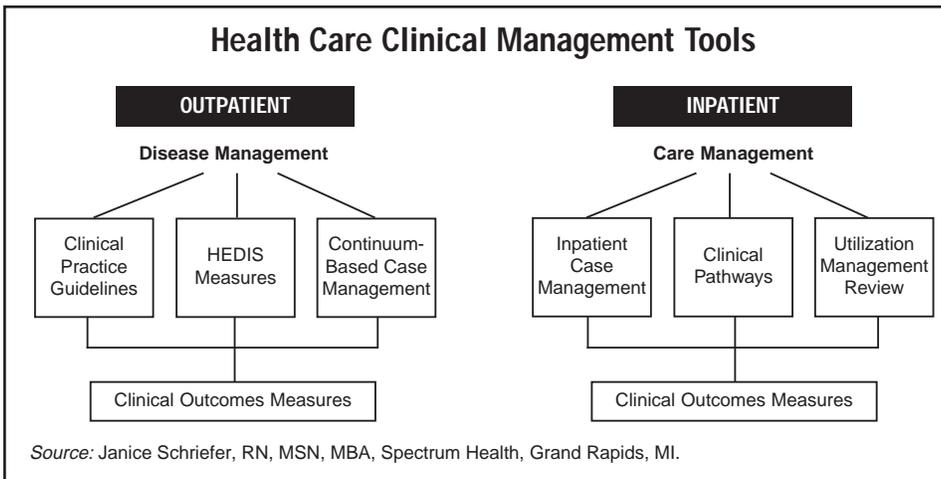
"Health and disease management may be defined as a clinical improvement process aimed at ensuring that the best practices known to medical science are incorporated with minimal variation over the entire continuum of care."<sup>1</sup>

DM relies heavily on information systems to identify people who use a lot of services. Case management also does that to a certain extent, says **Janice Schriefer, RN, MSN, MBA**, clinical systems improvement specialist at Spectrum Health in Grand Rapids, MI. The difference lies in the focus, however. "Case management deals with individual patients, while disease management deals with patient populations," she explains. (**For a picture of how DM relates to the continuum of care, see "Health Care Clinical Management Tools," p. 3.**)

One example of using different focuses: using a database to sort patients with high service utilization. A case management emphasis would use cost to select individuals who incur high dollar expenditures. A DM focus would use disease groupings to select populations with potentially high utilization diseases such as asthma, chronic obstructive pulmonary disease, congestive heart failure, or diabetes.

It may come as a surprise to hear that DM and cost reduction strategies might not be compatible. For that reason, **David Shulkin**, chairman and CEO of DoctorQuality.com, advises that "organizations must fit their disease management goals into their strategic business decisions from the planning stage forward."

Bernard, professor of medicine at the University of Pennsylvania School of Medicine in Philadelphia, calls DM "the ultimate promise of managed care — an amalgam of all the strategies



whole continuum of care. While, we typically think of moving the patient from point A to point B for services, a good DM program moves the services around the patient, according to Joshi, former senior director of quality at the University of Pennsylvania Health System. (See “Disease Management Models,” at left.)

There is no question among experts who spoke with *QI/TQM* that DM is good medicine. It also requires high maintenance and a lot of resources. Here are a few of the ways it can run aground:

**1. If the emphasis is on program development to the neglect of continuous program improvement.**

**2. If you count on the primary care physician to carry the ball.** Forget it, warns Bodenheimer, “The poor, beleaguered primary care physician doesn’t have the time! We’re too besieged with acute problems. We need somebody else to do it.”

**3. If it’s treated as a static program, instead of an integrated process.** “You need to have all the pieces in place and use them as a continuum,”

### Disease Management Models

PRIMARY CARE-BASED	SPECIALTY-BASED	IDEAL
<p><b>Delivered by</b></p> <ul style="list-style-type: none"> <li>primary care physicians</li> <li>nurse practitioners</li> <li>dietitians</li> <li>pharmacists</li> <li>therapists</li> <li>continuum-based case managers</li> </ul> <p><b>Care standards derived from</b></p> <ul style="list-style-type: none"> <li>clinical practice guidelines</li> </ul> <p><b>Outcomes derived from</b></p> <ul style="list-style-type: none"> <li>HEDIS measures</li> </ul> <p><b>Suits patients</b></p> <ul style="list-style-type: none"> <li>with well-controlled chronic conditions</li> <li>with low acute care usage</li> </ul> <p><b>Problems</b></p> <ul style="list-style-type: none"> <li>difficult to manage numerous complex conditions</li> <li>difficult for primary care providers to stay abreast of latest developments for numerous complex conditions</li> </ul> <p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>patient goes to one provider</li> <li>provider knows big picture</li> </ul>	<p><b>Delivered by</b></p> <ul style="list-style-type: none"> <li>cardiologists (congestive heart failure)</li> <li>endocrinologists (diabetes)</li> <li>pulmonologists or allergists (asthma)</li> <li>clinical nurse specialists</li> <li>pharmacists</li> <li>therapists</li> <li>case managers</li> <li>social workers</li> </ul> <p><b>Care standards derived from</b></p> <ul style="list-style-type: none"> <li>clinical practice guidelines</li> <li>clinical pathways</li> </ul> <p><b>Suits patients</b></p> <ul style="list-style-type: none"> <li>with advanced chronic diseases</li> <li>with increased hospital usage</li> </ul> <p><b>Problems</b></p> <ul style="list-style-type: none"> <li>fragmented care</li> <li>hand-off difficulties for specialists and primary care providers</li> <li>specialists often uncomfortable with primary care role</li> </ul> <p><b>Advantage</b></p> <ul style="list-style-type: none"> <li>specialists better able to stay abreast of new developments</li> </ul>	<p>Primary care providers coordinate patient’s overall health care</p> <p style="text-align: center;">↕</p> <p>regular communication</p> <p style="text-align: center;">↕</p> <p>Specialists treat specific diseases</p> <p style="text-align: center;">↕</p> <p>DRAMATIC IMPROVEMENT</p>

Source: Janice Schriefer, RN, MSN, MBA, Spectrum Health, Grand Rapids, MI.

developed over the past few years. It defines the best way to treat chronic diseases and puts the systems in place to provide that care. And it doesn’t come cheap.”

Nor is it a guarantee of short-term cost reduction. Bernard says he has learned from firsthand experience as former senior medical director of Health and Disease Management at the University of Pennsylvania Health System in Philadelphia. He explains that the system developed financial problems in applying its DM programs and has been forced to scale them back. “When managed care was introduced, it was supposed to improve quality and preventive care.” But the management of care has gradually slipped out of clinicians’ hands, he contends. “Disease management returns the decision process to the clinician.”

DM also thrives in organizations that deliver the

Joshi says. “The whole system has to restructure itself to make DM work. It’s a fundamental change in the approach to care.” He offers the example of regular foot exams for diabetics. Instead of directing all the change efforts to the doctor, the person who escorts patients to the exam room should ask them to remove their shoes and socks for a foot exam.

**4. If it’s mistaken for a short-term cost reduction strategy.** “The right question to ask is, ‘Do you achieve the quality of care you set out to achieve?’ not whether you get a return on the investment,” Bernard states. Indeed, it may well increase costs for a while. “When physicians talk about disease management for osteoporosis, they say screening should start with teenagers. There’s still plenty of time to do something about bone loss. If we do that, however, we will not see a return until the

## Special offer for alternative medicine nursing newsletter

American Health Consultants, publisher of *QI/TQM* and *Alternative Medicine Alert*, is pleased to announce the publication of a new monthly newsletter for nurses on alternative medicine and holistic nursing. Beginning in January 2000, each issue will contain review articles of specific alternative therapies and modalities; abstract and commentary from current medical and nursing journal articles; and columns on controversies in holistic nursing, applying therapies to clinical nursing practice, and legal and ethical issues surrounding holistic nursing and alternative medicine. Subscribers will be eligible to receive approximately 12 contact hours of nursing continuing education credits at no extra charge.

As a subscriber to *QI/TQM*, you will be able to purchase an annual subscription at \$149 — \$50 off the regular subscription price of \$199. To reserve your subscription, please contact our Customer Service department at (800) 688-2421 or e-mail: [customerservice@ahcpub.com](mailto:customerservice@ahcpub.com). Reference "HNA 61760" to take advantage of this special offer. ■

teens reach age 65 when women develop spine problems and fractures from osteoporosis."

But screening is expensive, and managed care companies will not agree to it for all teenagers, he observes. "So, doctors follow the managed care guidelines and screen when women reach their 40s or 50s. By then, they have less time to prevent the problems. And, even then, the payoff is 20 years down the road."

**5. If organizations fail to work out equitable distribution of monies.** The best DM delivery teams consist of specialists and primary care clinicians to ensure treatment of all the patient's health care problems. "But that doesn't always happen," Schriefer says. "There's the professional envy over payment differences between primary care physicians and specialists." In capitation plans, she notes, there's also the question of which fund a fee should come out of when primary care physicians and specialists are involved in a case. "Even though disease management prevents admissions, physicians can't help but wonder whether it will pay off in this year's contract."

**6. If it is turned over to a "carve-out" entity.** Patients do not respond as well to educational brochures or phone calls from a third-party monitoring organization, Bodenheimer says. "It has to

be someone who is where the patient is, like the office nurse or the health educator who sits down and teaches them about their diet or exercise or medications. For example, we have too many rheumatoid arthritis patients who have not been taught to use exercise as part of their home care."

### 7. If DM is launched from the wrong base.

"There's no way every private medical practice can do it," Bodenheimer says. They don't have the resources. Exceptions include large independent practice organizations such as Lovelace Health Systems in New Mexico and the Kaiser Health Plan, he adds. They have the resources and both systems implement the concept well. Even if DM does fade into oblivion as the fad of the 1990s, Bodenheimer observes, it's still good medicine.

From its earliest days, DM was ripe for conflict of interest and misunderstanding. He explains that it was promoted by pharmaceutical companies in the early 1990s. They provided databases, and epidemiological and patient education tools to help providers implement DM programs.

"But the ethical problems in those arrangements

## Need More Information?

For implementation of DM programs, contact:

- Janice Schriefer**, Clinical Systems Improvement Specialist, Spectrum Health, (no street address is necessary) Grand Rapids, MI 49503. Telephone: (616) 391-2974. E-mail: [janice.schriefer@spectrum-health.org](mailto:janice.schriefer@spectrum-health.org). Alternate e-mail: [jschrief@umich.edu](mailto:jschrief@umich.edu).
- Maulik Joshi**. E-mail: [MaulikJoshi@HealthExecutive.com](mailto:MaulikJoshi@HealthExecutive.com).
- David Bernard**, MD. Telephone: (215) 772-0257.
- David Shulkin**, MD. DoctorQuality.com (a best-practice implementation site for physicians and others in the health care professions), 944 Merion Square Road, Gladwyne, PA 19035. Web site: [www.doctorquality.com](http://www.doctorquality.com).

For insights on handling disease management data, see:

- Liang MH, Shadick N. Feasibility and utility of adding disease-specific outcome measures to administrative databases to improve disease management. *Ann Intern Med* 1997; 127:739-742.

For information about disease management and case management software, contact:

- ThinkMed**, 312 E. Wisconsin Ave., Suite 314, Milwaukee, WI 53202. Telephone: (414) 287-6000. Web site: [www.thinkmed.com](http://www.thinkmed.com).

arise when another drug company comes out with a better drug," Schriefer notes. "Clinicians need to be committed to switching to a better drug if or when one comes along, even if it's made by a different manufacturer."

Bodenheimer sees additional problems with the carve-out approach. He laid them out in a recent article: "Commercial programs must obtain contracts from employers and managed care organizations to make a profit. To get contracts, they must save money for their clients. To save money, they must focus on the patients who are at highest risk, who have the most expensive health care needs, and who are motivated to follow medical recommendations."<sup>2</sup>

The large numbers of patients with low risk or less motivation are of little interest to commercial programs, he notes. Risk-stratifying information systems enable commercial DM programs to select the patients for whom health care costs can be reduced. That leaves the care of less motivated patients to comprehensive health care organizations and primary care physicians, he contends — and he argues for keeping DM under the auspices of health

care delivery systems and affiliated providers.

Bernard shares that opinion. Describing DM as the "ultimate way to improve the care of patients," he decries its misuse — limiting it to areas where it has quick returns, typically in congestive heart failure and asthma. "It's a tragedy when it's used in that way," he states. "The reality is that you do not make more money by taking good care of patients." (For a description of a DM initiative for diabetic care, see *QI/TQM*, October 1999, p. 121.)

(Next month, Part Two in this series looks at chronic care as the biggest challenge to face the health care industry in the next 10 years: designing services for the 100 million people who have chronic conditions, a number that is destined to balloon to 135 million by 2020.)

## References

1. Joshi MS, Bernard DB. Classic CQI integrated with comprehensive disease management as a model for performance improvement. *Jt Comm J Qual Improv* 1999; 25(8):383-395.
2. Bodenheimer T. Sounding board: Disease management — promises and pitfalls. *N Engl J Med* 1999; 340(15):1,202-1,205. ■

## Special Report: Health Care's High-Tech Boom

### Bar-coding programs outdo manual record tracking

*UIHC retrieves nearly 100% of 1.2 million records*

If your organization is still years away from electronic medical records (EMR), bar coding could be your interim solution to an unreliable check-in, checkout system. For the University of Iowa Hospitals and Clinics (UIHC) in Iowa City, bar-code tracking retrieves 99.9% of the daily checkouts from a store of 1,230,135 active records. Compare that to 65% to 75% retrieval from the old 3 x 5 card system, which received an honorable discharge 10 years ago.

Tammi Craft, senior associate director of UIHC's health information management department, is quick to note that bar-coded record tracking is not unique in health care, but its near-perfect retrieval rate — "that's something we're very proud of." As a whole, the clinics see 600,000 patients a year. Orthopedics alone sees approximately 180 appointments a day, and the university clinics, as a whole, have 2,400 appointments a day. Typically, a department's chart-control employees make three to four

record retrieval runs a day to medical records, compared to the card system era when it took one person an entire day to do the job.

While near-perfect retrieval can be attributed partially to a sophisticated tracking system, Craft notes, "we couldn't do it without full commitment

## Key Points

- Location:** The University of Iowa Hospitals and Clinics in Iowa City is one of the largest teaching institutions in the nation.
- Situation:** The health care information management department maintains more than 1.23 million active patient records. For clinic visits alone, 2,400 records leave the department each day. That doesn't include records pulled for research projects and consults.
- Solution:** The institution has been developing and testing its electronic medical record for several years. Meanwhile, bar-code tracking serves the records management function. Retrieval rates exceed 99%.

### More Bar-coding Resources

If steady annual increases in paper usage are any indication, a paperless health care industry might never materialize, says **Ray Mostad**, marketing representative for Smeadlink, based in Hastings, MN. Even in systems with electronic medical records (EMR), he says, "nobody wants to get rid of all their paper." So, even if you have EMRs, bar-coded document tracking might be worthwhile for managing other information. Here are two companies that offer bar-code systems capable of interfacing with most computer systems:

✓ **Smeadlink** manages electronic documents such as EMR, scanned images of hard copy documents, as well as faxes, paper files, and patient records. Users access the system through one interface. Founded in 1994, Smeadlink is a division of Smead Manufacturing, the maker of file folders.

**Description:** The software can be customized to meet user specifications. Functions include a document history such as creation, check-out, check-in dates; and reports on the frequency of use.

**Hardware requirements:** Most PCs can run the software, from the 486 models on up.

**Cost:** Varies according to the number of users and functions. Mostad estimates that an installation accessible to 25 or 30 users, offering bar-code tracking of paper patient records plus scanned copies of documents would run \$30,000 to \$50,000. Upgrades are free.

**For information:** Ray Mostad, 600 Smead Blvd., Hastings, MN 55033. Telephone: (800) 216-3832 or (651) 480-5488. World Wide Web: [www.smead.com](http://www.smead.com)

✓ **IHS/SoftMed** provides a variety of health information management packages, including bar coding, to facilitate medical records management. It also offers systems for designing treatment plans and tracking outcomes. The company was founded in 1986.

**Description:** IHS/SoftMed customizes packages to meet the user's needs.

**Cost:** Varies according to size and complexity of the system.

**For information:** IHS/SoftMed, 160 Blue Ravine Road, Folsom, CA 95630. Telephone: (800) 695-4447. World Wide Web: [www.ihsinc.com](http://www.ihsinc.com).

from the staff. And we continually remind people to scan the charts in and out when they use them." To drive the message home, medical records and chart control staff ask people to consider how they would feel if their child came into the emergency room and nobody could find his or her records.

As it stands, retrieval for the emergency room averages 30 minutes during the day. At night, it's 20 minutes, thanks to the three- to five-person crew who staff the health information management department outside of regular business hours.

The detail-rich paper trail, built into the bar-code software, boosts the retrieval rate. It begins at the central appointment desk where all inpatients and outpatients register. The hospitals and clinics use a unit record so all documents pertaining to an individual are in one folder. New patients receive a registration number, which is associated with a bar code.

Each time a record is scanned in or out of a department, this information is recorded:

- **time;**
- **date;**
- **location;**
- **operator** (usually the department's chart control staff) and operator's phone number;
- **list of the patient's appointments**, automatically posted from the institution's on-line appointment scheduling process.

The institutional rule is that the last person to handle the record is responsible for its location. **Fred Fevold**, supervisor of the orthopedic chart control office, explains how the rule works: "Even if the recipient does not scan in a chart, the system still shows that I scanned it out of my office at 8:45 a.m. And it names the recipient. Then I'm responsible for calling the recipient and asking where the chart is." Since chart control staff handle most records, mixups like the ones Fevold describes aren't a big deal.

More troublesome, and time-consuming, are the occasional incidents in which a physician carries off a record for an off-site project. Even then, the electronic paper trail helps resolve the problem. Any new documents for temporarily or permanently lost charts go into a temporary chart identified with the patient's bar code. "The next person who scans the patient's primary record sees a warning flag that a partial record exists. Its location is recorded so it can be combined with the primary record," he says.

Craft credits the success of the bar-code record tracking to three factors:

1. detail of tracking system;
2. links between on-line appointment scheduling and record tracking;
3. commitment of all staff to scanning records.

Rather than strive for 100% retrieval rates, Craft says they are putting their resources into the EMR development. According to **James R. Wagner**, the health center's director of information systems, institutionwide rollout of Phase 2 is planned for this year. Components will include on-line order entry, diagnoses, and problem list, procedure capture, structured dictation, coding, automated visit follow-up, and billing. Wagner anticipates the full EMR to go live within five years.

In orthopedic surgery, however, administrator **Paul Etre** hopes to have full EMR implementation by July 2000. His department has been a primary test site for the EMR. Currently, touch-screen computers in the orthopedics' waiting rooms enable patients to complete their histories. From there, the system generates a narrative

summary for the physician. Terminals at the nursing stations allow clinicians to enter vital signs and update medication lists. Residents enter details about the patient's reports of their current progress, and the physician completes clinical notes during the patient's appointment.

The system prints a hard copy of notes from the visit to be faxed to the patient's next appointment or handed directly to the patient. (See story on UIHC's department of orthopedic surgery, chosen as a "Better Performer," *QI/TQM*, March 1999, p. 37.) ■

## Voice recognition software getting better

*Users say it will never answer all input needs*

Lame typing skills are no problem for radiologists at LDS Hospital in Salt Lake City. With the facility's voice recognition software, doctors can dictate their notes, watch their words take shape on the computer screen, and then edit them. It's affordable, accurate, and fast. The turnaround from digital (computerized) X-ray image to report is usually under 20 minutes.

According to **Roger Buxton**, MS, RN, voice-driven radiology reports are just the beginning. Buxton, director of nursing information systems, sees LDS' first application of the technology as the ideal way to watch it in action as it matures and spawns new models. In several years, he expects to introduce some descendant of this generation into nursing documentation. "Personally, I'm quite excited about the prospects of this happening," he says.

So far, staff at LDS like what they see, yet are not anxious to burden the technology with higher expectations than it can handle.

Among the early customers in radiology, satisfaction runs high. "One doctor recently told me that he gets a report back to the emergency room or one of the hospital's outpatient clinics before the patient gets back there," reports **Peter Haug**, MD, LDS's co-director of medical informatics. "As with any technology I've ever introduced, however, it has had mixed reception." Currently, 42% of LDS' X-ray reports are completed via

### Need More Information?

For information on bar-code records tracking and development of an electronic medical record, contact:

- ☐ **Tammi Craft**, Health Information Management Department, University of Iowa Hospitals and Clinics, Iowa City, IA. E-mail: tamra-craft@uiowa.edu.
- ☐ **Fred Fevold**, Orthopedic Chart Control Office, University of Iowa Hospitals and Clinics, Iowa City, IA. E-mail: fredrick-fevold@uiowa.edu.
- ☐ **Paul Etre**, Department of Orthopaedic Surgery, University of Iowa Hospitals and Clinics, Iowa City, IA. E-mail: paul-etre@uiowa.edu.

For information on developing bar-code tracking systems and electronic medical records, contact:

- ☐ **James R. Wagner**, Director of Information Systems, University of Iowa Hospitals and Clinics, Iowa City, IA. Telephone: (319) 356-4445.

*(Wagner says he is available for inquiries concerning possible acquisition of UIHC's medical record tracking software. But he cautions that there may be transportability issues because the system was created in-house to meet UIHC's specific requirements. You'll find additional products described in "More Bar-coding Resources," p. 6.)*

voice recognition. Haug expects to reach the 50% level soon. "There will be a subset of radiologists who never see the advantage in it," he says.

Other limitations of current voice recognition programs include:

□ **Confidentiality of patient information.**

While not such a concern in private office situations, it's a particular problem with spoken data entry on nursing floors.

□ **Adaptability to stylized or structured data entry for extraction into quantitative reports such as outcome or utilization.** Similarly, discrete data sets for the factual sections of the electronic medical record might present similar problems. "It will be difficult to get clinicians to comply with stylized input," Buxton observes. "We're going to have to open the new frontier a little more first."

□ **Recognition of broad clinical vocabularies as used for internal medicine or nursing care.** Currently, the software offers well-developed dictionaries for specialties such as radiology, cardiology, and emergency care.

□ **Accurate recognition and transcription when a user's voice temporarily changes due**

**to hoarseness or a bad cold.**

Haug calls radiology report turnaround the "low-hanging fruit" among QI advances from speech recognition technology. "It will be harder in other areas where the clinicians have to move from one patient to another. The emergency room appeals, but we've not gone there yet. We are experimenting in the outpatient area."

Portable, voice-driven devices could be the next offshoot, Buxton says. Indeed, it would have to be something like that to beat the highly functional setup of bedside terminals on the nursing units. "We would have to make the new technology easier and faster. We're not going to get them to lug a laptop in order to enter patient data as they move around the unit."

"Eventually, we'll need a multimodal system, to combine voice recognition and keypunched commands," he predicts. The solution could be portable wireless devices. Perhaps pocket instruments akin to today's hand-held computers. "We figure it will come on board in five to six years," he projects.

In the pilot stage, the vendor taught the most receptive radiologists how to dictate their reports to the computer. Now LDS employs professional trainers to teach the more reluctant group.

Training is in two stages. First, the user reads to the computer for 40 to 60 minutes, training the program to recognize his or her voice. "Then the system trains the radiologist!" Haug notes. Eventually, the radiologist learns to use proper diction and omit alien utterances like "um, ah, and oh well."

"After the system trains them, most of them like it. As we move, we ask ourselves how to make the incentives to use it equal to the disincentives," he adds. The disincentives involve about three weeks of dissatisfaction.

While several good software packages are on the market, Haug says, LDS uses the Dragon Engine. "The advantages of one system over the other are rapidly disappearing," he observes. "The performance of each will soon come down to the quality of a user's computer and microphone or the bells and whistles within a software package."

For instance, at LDS, the Dragon Engine is embedded into a program called Radiology Workstation, which provides supportive data including the patient's radiology history and

### Key Points

**Location:** LDS Hospital in Salt Lake City is part of Intermountain Healthcare, an integrated system that serves people throughout Utah.

**Situation:** As part of a long-range effort to streamline and manage patient information, the hospital is testing the use of voice recognition software.

**Solution:** Introduction of the program to the radiologists has provided insights about its possibilities and limitations. Nearly 50% of the physicians currently use it and report high satisfaction. X-ray report turnaround can be as low as 20 minutes. The technology is improving rapidly. LDS informatics specialists see voice-driven programs as better suited to office-based clinical documentation than to the more mobile functions on nursing units. There, the solution will probably be a yet-to-be-created combination of pocket-size wireless devices, operated by voice and keypads.

## Need More Information?

For information on practical applications of voice recognition or dictation software, contact:

- **Roger Buxton**, Director, Nursing Information Systems, LDS Hospital, Salt Lake City. Telephone: (801) 408-1754. E-mail: ldrbuxto@ihc.com.

For information on voice recognition programs, contact:

- **Dragon Systems**, 320 Nevada St., Newton, MA 02160. Telephone: (617) 965-5200. Web site: www.dragonsystems.com.
- **Lernout & Hauspie**, 52 Third Ave., Burlington, MA 01803. Telephone: (781) 203-5000. Web site: www.lhsl.com.

other clinical data. This allows the physician quick reference to background information that can be useful in interpreting radiology findings.

### Word Power

## To heal more, clinicians can learn to listen more

*When encounters go sour, find ways to mend*

**F**rederic W. Platt, MD, tells clinicians that only 50% of medicine is about disease. "The other half is the people wrapped around the organs you're working with," he says. Platt is regional consultant for the Bayer Institute for Health Care Communication and clinical professor of medicine at the University of Colorado, in addition to his practice as a primary care physician in Denver.

Most clinicians know how to fix, prevent, or slow down disease, as long as the patient cooperates. But healing is more elusive, which happens when the owner of the disease becomes a partner in the clinical fix, rather than a rebellious subordinate. Platt teaches seasoned clinicians as well as medical residents how to use the portals to a healing partnership, and he shares them with *QI/TQM*:

- **Slow down to go faster.** If you listen more and talk less early in the encounter, you can accomplish much more later. For openers, shake hands and greet the patient by name. And, most importantly, Platt stresses, "sit down and look the patient in the eye." Say to the patient, "Before we get into the medical stuff, I would like you to tell me something about yourself." Then give him or

her about 60 seconds to talk without interruption. "Usually after a minute, they begin to wind down," he says. "Meanwhile, you've learned about their lifestyle, their job, and what matters to them." In seminars, Platt observes, doctors assure him that they consistently listen to their patients without interruption, but at least two studies show otherwise.<sup>1,2</sup>

Based on the LDS experience, Haug offers this cost information:

- **Speech recognition package** — approximately \$500 per computer.

- **Hardware requirement** — \$1,500-range computer.

- **Development costs** — installation time plus five to eight hours training for each radiologist. Training extends through the user-trains-machine and machine-trains-user periods.

**(For a description of other information management programs at LDS, see *QI/TQM*, May 1998, p. 57.) ■**

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- **Learn open-ended inquiry.** Instead of questions that can be answered with yes or no responses, cast a wider net: "Tell me about your back pain." "What makes it worse?" "How often do you have to miss work?" "What were you hoping to accomplish during this visit?"

- **Ask, "Anything else?" to prevent "Oh, by the way," as you exit.** Sometimes, a patient will raise the most important point of the visit just as you stand up to leave. To prevent this from happening, or at least reduce the frequency, ask "Is there anything else?" as you note the patient's list of topics for the visit. In a study<sup>2</sup> of urban, semi-rural, and

## Key Points

- Listen closely during opening minutes of the patient interview; you will save time later.
- Help the patient lay out the entire agenda early in the visit to enable coverage of the most important issues.
- Instead of labeling a patient as "difficult," identify and set straight the difficulties in the clinician-patient relationship.

rural practices, 75% of physicians solicited such input. However, only 28% of the patients got to complete their opening statements. Others were redirected by the physician after an average of 23 seconds. Last-minute concerns were more common when physicians did not solicit them up-front, nearly 35% vs. 15%.

• **Open portals in the clinician-patient relationship.** Platt describes portals as doors, rooms, or spaces in the clinician-patient relationship where something other than medical fixing happens. Opening the portal to negotiation enables you and the patient to set the agenda for the visit. Ask, "What are all the things on your list to discuss today? I don't think we'll get to all three. So which is No. 1?" Then, says Platt, negotiate a follow-up plan, whether it's a future appointment or a referral to another provider.

The words, "sounds like" unlock the portal to the empathic space. Those words are nearly magical when it comes to assuring a patient that you understand and respect his or her feelings. For example, "Sounds like your life has been lonely since your wife died," or "Sounds like you have felt real sad since your dog died."

In his book, *Field Guide to the Difficult Patient Interview*, co-authored with Geoffrey H. Gordon, MD (Lippincott Williams & Wilkins, Baltimore), Platt acknowledges that empathy takes time. However, he writes, "If you use understanding responses, you will be amazed at how much faster the interview progresses

once the emotional outburst is named and understood."

• **Redefine "difficult patient" to "difficult clinician-patient relationship."** Labeling the patient as difficult focuses your attention on something you probably cannot change — the personality. If you focus on the relationship as the trouble, however, you have some options. "It could be a difficult disease or difficulties in the system of health care, or in the ways you are interacting with the patient that are causing the friction," Platt observes.

To avoid blaming the patient, or to re-focus blame that the patient is dumping on you, stop and consider what's wrong with the interaction. "Ask him or her for help," he advises.

How can you do this? Invite mutual problem solving with a statement such as "I think we are having some difficulty here. Sounds like you see that the way out of your pain is to keep taking the pain meds. The way I see is for you to finish the rehab appointments. Is there any way we can work together on this?"

If the patient is angry about something you did, even if you could not help it, consider an apology. For example, if you agreed to talk with Betty Smith and her daughter at 4:30 but were involved in an emergency with another patient at the time, express your regret. Offer to make amends and ask Betty Smith how she would like you to handle it.

While the techniques described above facilitate the best use of time allotted to each visit, "you can't do 20 minutes worth of work in 10 minutes," Platt contends. If outpatient appointments consistently run overtime, before prodding the clinicians to go faster, administrators should ask their input on the amount of time it takes to do the job. Platt also suggests asking patients how much time they think they will need when they call for appointments.

After all, he observes, "You don't say to the surgeon, 'You have X minutes to complete a gall bladder operation.' It takes how long it takes. That could be less than 'average' for an uncomplicated operation and twice the 'average' for a complicated one."

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1. Beckman H, Frankel R. The effect of physician behavior on the collection of data. *Ann Intern Med* 1984; 101:692-696.
2. Marvel MK, Epstein RM, Flowers K, et al. Soliciting the patient's agenda: Have we improved? *JAMA* 1999; 281:283-287. ■

## Need More Information?

For information on communicating with patients in ambulatory and inpatient settings, contact:

- **Frederic Platt**, MD, 1901 E. 20th Ave., Denver, CO 80205. Telephone: (303) 377-2759. Fax: (303) 333-9262. E-mail: Frederic.Platt@UCHSC.edu.

For information on continuing medical education workshops on patient interaction skills, contact:

- **Bayer Institute for Health Care Communication**, 400 Morgan Lane, West Haven, CT 06516. Telephone: (800) 800-5907. Fax: (203) 812-5951. E-mail: bayer.institute@bayer.com. Web site: www.bayerinstitute.org.

For information on effective wording of printed communications, contact:

- **Peter Salovey**, PhD, Department of Psychology, Yale University, New Haven, CT. E-mail: peter.salovey@yale.edu.

## Two tricks can improve persuasive print messages

*Know when to tell people what they'll gain or lose*

While we can't promise that this information will take all the pain out of putting your ideas into words, it can take away some of the guesswork. Psychologist **Peter Salovey**, PhD, of Yale University in New Haven, CT, has discovered how to improve the odds of getting the desired response to your written messages.<sup>1,2</sup> His tips can work as well with consumers as with colleagues. The trick is knowing when to tell people what they'll gain and when to tell them what they stand to lose.

✓ **Gain-framed messages persuade people to engage in risk-free behavior.** They're most effective with prevention behaviors. Salovey explains, "Just tell people [simply] the good things that can happen if they do the behavior."

**Examples:**

- Use sunscreen to help your skin stay healthy.
- Eat a low-fat diet to help you control your weight.
- Match patient ID tags with the labels each time you dispense drugs.

✓ **Loss-framed messages persuade people to engage in riskier, but desirable, behavior.** Mammography, pap testing, or HIV screening, for instance, involve the risk of discovering health problems. While acknowledging the immediate risk, loss-framed messages explain the more serious risk of avoiding the action. In health matters, Salovey finds that they work best where an immediate risk can head off serious long-term consequences. In the workplace, loss-framed messages are effective when you ask people to make short term sacrifice to avoid future problems.

**Examples:**

- When you put off your regular mammogram, you fail to take advantage of the best method for detecting breast cancer early.
- While a pap test might discover cervical cancer, it can find it early when it is most treatable.
- We realize that attending Saturday's electronic medical record workshop means giving up your day off. But look at it this way, it's your one-time opportunity for individual coaching by

experts who will not be here when we go live in three months.

✓ **The element of surprise, by framing messages in unexpected ways, is another way to command attention — and possibly compliance.** "It depends on what you're trying to sell,"

Salovey notes.

**Examples:**

- Put money in your pocket and air in your lungs. Stop smoking.
- Tired of phone tag? Try e-mail.

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1. Detweiler JB, Bedell BT, Salovey P, et al. Message framing and sunscreen use: Gain-framed messages motivate beach-goers. *Health Psychology* 1999; 18(2):189-196.
2. Rothman AJ, Salovey P. Shaping perceptions to motivate healthy behavior: The role of message framing. *Psychological Bulletin* 1997; 121(1):3-19. ■

QI/TQM® (ISSN# 1075-0541) is published monthly by American Health Consultants®, 3525 Piedmont Road N.E., Building Six, Suite 400, Atlanta, GA 30305. Telephone: (404) 262-7436. Periodical postage paid in Atlanta, GA 30304. POSTMASTER: Send address changes to QI/TQM®, P.O. Box 740059, Atlanta, GA 30374.

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# TECH WATCH

(With this issue, QI/TQM introduces a new column, *Tech Watch*, which will report on new and developing technological products and processes. We are also planning another new column, *Data Watch*, to keep you informed about new or improved data sources. Both will rotate with *Grass-Roots QI* and will usually appear on the last page of each issue.)

The Health Insurance Portability and Accountability Act of 1996, also known as the Kassebaum-Kennedy bill, has mandated the overhaul of medical privacy rules. Final provisions of the law will come out after Feb. 21, and take effect two years hence. Insiders predict it probably will involve as much or more infrastructure change for health care as Y2K. Anybody who's been behind the scenes of Y2K initiatives knows such change involves heavy cash outlays. Estimates run as high as \$250,000 for many hospitals. One health care technology company, **QuadraMed**, based in Richmond, CA, has anticipated the security challenges the regulations will almost certainly raise. Its solution complies with the proposed national medical privacy rules outlined last October.

**OneLook** is a security device based on biometric identification as the access vehicle to patient records. Instead of a password or user name, a user scans his or her thumbprint into the computer. OneLook customizes an individual's access to files and programs, keeping certain parts of the network closed as desired.

#### Features

- Combines security with flexibility of access for individual users.
- Identifies which emergency room physicians are on duty at any given time.
- Offers each user a menu of the network areas to which he or she has access privileges.
- Functions on various operating systems.

#### Benefits

- Eliminates the need to remember passwords and user names.
- Resolves security breaches from sharing passwords or user names.

#### Potential problem

- Users might raise legitimate objections to having their thumbprints on file with one or more health care networks.

#### Who uses OneLook?

- Burdette Tomlin Memorial Hospital, a 242-bed facility in Cape May, NJ.

**Cost:** Approximately \$5 to \$10 per seat, per month.

**Information:** Victoria A. Goldberg, Sterling Hager Inc., Waterton, MA 02472. Telephone: (617) 926-6665, ext. 237. E-mail: victoria@sterlinghager.com.

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## Fast-tracking: Benefits vary

Do hospitals really save money by giving patients lighter anesthesia so they can wake up and go home earlier? It depends on which institution, according to a study at the University of Iowa in Iowa City. **Franklin Dexter, PhD, MD**, associate professor of anesthesia, found that financial benefits depend heavily on the institution's labor payment structure. Fast-tracking can decrease an institution's costs because less staffing time is required. Patients wake up more quickly and can leave the operating and recovery rooms sooner.

If a facility pays its ambulatory surgery staff by the hour, and if fast-tracking reduces substantial overtime costs, the savings can be significant. On the other hand, if ambulatory surgery staff is on a set salary, savings do not materialize.

Dexter says fast-tracking is here to stay. "From the patient's point of view, it's an advantage because it gets them out of the hospital quicker so they can be at home." From the hospital's perspective, the technique can increase productivity because it frees staff to do other tasks. "It may not decrease costs but rest assured that it is going to increase productivity."

For more information, contact Jennifer Cronin, University of Iowa Health News. Telephone: (319) 335-9917. E-mail: jennifer-cronin@uiowa.edu. ■