Since the mid-1980s, Saint Vincent Memorial Hospital, Taylorville, IL, has been working with physicians and hospital managers to improve resource utilization. A 179-bed facility affiliated with the ASC Health System, Saint Vincent serves a rural community within 30 miles of four urban tertiary care centers.

Because the hospital has small operating margins and faces reduced reimbursement, effective stewardship of its resources is essential to its ability to continue its mission of community service. In 1990 Saint Vincent intensified efforts to improve resource utilization by taking steps to reduce patient length of stay when possible and appropriate. A program of daily case review and medical staff education has helped the hospital reduce average length of stay from between 7 and 8 days to between 5 and 6.8 days.

**EARLY EFFORTS**

In the mid-1980s Saint Vincent began to work actively with physicians to familiarize them with the effects of the prospective payment system on the facility's financial health. Differences in length of stay—as well as in utilization of laboratory, diagnostics, and other ancillary services—have become critical issues for hospital administrative teams and governing boards in their financial oversight capacity. However, hospital attempts to establish utilization guidelines have mixed success because physicians at times are reluctant to question colleagues' practice behaviors. Any effective utilization management program requires physician participation and peer review.

To create a basis for collaboration with physicians and improve utilization, in 1987 Saint Vincent contracted with an outside consulting firm to conduct a study profiling nonacute days in 100 cases. (A nonacute day is a day in which a delay in stay or resource inefficiency has been identified.) The purpose was to determine whether continued stay in these cases was medically necessary for the acute level. The study revealed that, although Saint Vincent's utilization

**Summary**

In 1990 Saint Vincent Memorial Hospital, Taylorville, IL, intensified efforts to improve resource utilization. A program of daily case review and medical staff education has helped the hospital reduce average length of stay from between 7 and 8 days to between 5 and 6.8 days. Steps taken to achieve this include:

- Hiring an outside medical adviser to oversee collection and analysis of data related to length of stay and conduct case reviews
- Appointing a medical review officer and a physician-specific case manager
- Establishing a Utilization Management Task Force, which has reformed the policy concerning patients with methicillin-resistant *Staphylococcus aureus* to ensure discharge in a timely manner; implemented a nonacute-day reporting system; and completed a transitional care study to identify the benefits of transferring medically stable Medicare patients to the Skilled Nursing Facility
Since the early 1970s John E. Wennberg, MD, has been researching the outcomes and effectiveness of medical interventions. His interest in this area of medicine began when he noticed considerable variation in rates of tonsillectomies in various towns in Vermont. Later, he and colleagues extended this work and identified marked differences in towns in Maine in rates of prostatectomies for benign prostatic hypertrophy (BPH). In meeting with urologists, Wennberg and his co-workers discovered that many of them favored early surgery to prevent later life-threatening complications. The researchers came to believe that physicians were not intentionally performing procedures at high rates; rather, the doctors were basing these decisions on personal biases because scientific data on outcomes were not available.

In subsequent studies the researchers showed that BPH was not necessarily a progressive disease and early prostatectomy did not increase life expectancy. Although surgery was effective in treating symptoms, it carried the risk of complications such as infection and impotence. Wennberg concluded that, except for patients who might suffer kidney damage without surgery, the "correct" incidence of prostatectomy is determined by the subjective judgments of patients, who have to weigh the risks against potential improvement of symptoms and quality of life.

Since some patients are more willing than others to tolerate discomfort and forgo surgery, physicians can only determine appropriate treatment by discussing possible outcomes with their patients so they can make informed decisions, insists Wennberg, who is director of the Center for the Evaluative Clinical Sciences at Dartmouth Medical School, Hanover, NH.

Wennberg, the center's founder, was also instrumental in obtaining government funding for the federal Agency for Health Care Policy and Research, which is studying outcomes (see article, p. 30).

Three years ago he and several colleagues set up the Foundation for Informed Medical Decision Making, a not-for-profit medical education and research organization that provides physicians with tools for communicating about treatment alternatives.

**INTERACTIVE VIDEOS**

The foundation's interactive video Shared Decision-making Programs, designed for use in everyday clinical practice, inform patients who are facing a treatment decision about the likely outcomes of various choices.

The foundation's first 45-minute video, produced in 1983, presents the probable outcomes of two approaches to BPH—"watchful waiting" and surgery. By viewing interviews with other patients who have chosen the different treatments—some with good outcomes and some with bad—more than 1,000 patients have obtained information about the risks and benefits of the two options. Patients enter personal data about their age, symptoms, and test results and then receive information tailored specifically to them so they can assess their own likelihood of and preference for experiencing the various outcomes.

Other videos cover mild hypertension, low back pain, and early-stage breast cancer treatment. Efforts are under way to produce programs dealing with hysterectomy, stable angina, prostate cancer, cesarean section, and estrogen replacement. All the videos feature actual patients describing their experiences and usually offer information on related topics. For example, patients viewing the video on mild hypertension can touch the screen to learn more about how to monitor their blood pressure, quit smoking, and save money on medications.

In addition to guiding patients, the interactive video programs will provide valid data on outcomes. Wennberg and his colleagues are working with medical practices, assessing outcomes according to the treatments patients select after viewing the videos.

The foundation has entered into a distribution agreement with Sony Medical Systems, Park Ridge, NJ, for the interactive programs. The two organizations are working to address implementation issues and probably will place the programs in clinicians' offices, hospital patient education centers, healthcare maintenance organizations, and workplace settings. Each setting presents a different implementation model.

**BENEFITS OF OUTCOMES RESEARCH**

Wennberg speculates that outcomes research may help contain costs because it will allow patients to set the thermostat for demand. If patients are more risk averse than physicians, then less risky interventions may be used more often than they now are. This seems to be borne out by the early findings with the BPH video, which indicate that informed patients demand less care and tend to choose more conservative treatments than their physicians.

The research also may provide useful information for restructuring the nation's healthcare system. Wennberg speculates. Resources currently used for less effective or less desired treatments could be reallocated to provide other needed services and increase access to care. The "islands of rationality" that outcomes data create in "an ocean of uncertainty" will indicate where to reduce the current excess capacity in facilities and specialists.

A new relationship between physicians and patients is on the horizon. The shared decision-making procedure, which the videos enable, will enhance patients' sense of control and trust and free physicians from the difficult task of determining what their patients might value. Doctors will act more as counselors who help patients identify their preferences. Most important, quality of care will improve as clinical decisions are based on scientific knowledge and patient preference.

—Judy Cassiday
patterns were similar to those of other hospitals with comparable size and demographic area, improvement was possible.

The consultants recommended that Saint Vincent concentrate more on short stays with home care follow-up, increase utilization of the hospital's skilled nursing facility for Medicare patients, and work toward timely transfer back to nursing homes of patients with methicillin-resistant Staphylococcus aureus (MRSA). The hospital continued its commitment to daily review of patients' conditions.

**NEW MEASURES**

In 1990, however, Saint Vincent began to take more aggressive measures to deal with extended lengths of stay. Several factors contributed to the difficulties the hospital encountered. First, in-house skilled nursing facility beds were not always available to patients. The hospital's high proportion of patients with chronic conditions that often hinder recovery also added to the problem.

In addition, the hospital recognized physicians were not using alternate levels of care to meet patients' nonacute needs, such as home care, skilled nursing facilities, and outpatient treatment. Finally, Saint Vincent had difficulty transferring patients to local nursing homes, which were reluctant to accept persons with MRSA.

To begin addressing these issues, the hospital engaged an outside medical adviser to oversee collection and analysis of data related to length of stay. The medical adviser also reviewed cases to determine the efficiency of the medical care process at Saint Vincent, especially for patients with high-volume diagnoses, particularly pneumonia. The hospital shared the results with physicians as part of a medical staff education effort.

In 1991 Saint Vincent's chief executive officer (CEO) took further action, not only to reduce unnecessary hospital days but also to improve overall resource utilization.

**Medical Review Officer** One key step was the creation of the medical review officer (MRO) position. The role of the MRO, a physician certified by the American Board of Quality Assurance and Utilization Review, is to lead the medical staff in developing effective utilization management strategies. The officer is responsible for oversight and coordination of utilization management efforts and strengthening of physician involvement in the process. The MRO also is the source of appeal for disagreements between an attending physician and the hospital's physician reviewer (a position that rotates on a monthly basis to a different medical staff member who volunteers to review patient cases). The MRO acts as a substitute when the physician reviewer is unavailable.

In addition, the MRO works closely with the hospital utilization management manager to review and revise the utilization management plan. With an understanding of the medical, hospital, and patient perspective on utilization issues, the MRO advocates quality care enhancement and is a catalyst for innovation. The officer's role will continue to evolve as Saint Vincent incorporates cost data with clinical information.

**Physician-Specific Case Manager** Through the nursing department, Saint Vincent also appointed a physician-specific case manager to assist a physician who had both the largest Medicare case load and the highest average Medicare length of stay. By coordinating care and services for that physician's acute care patients, the case manager has helped reduce the average length of stay for this physician's patients. The one-on-one approach has also allowed for daily communication regarding physician rounds and consistent tracking and feedback on patients' responses to various treatment modalities.

**Utilization Management Task Force** A Utilization Management Task Force—composed of the MRO, utilization management manager, case manager, CEO, and vice president of finance—has also helped Saint Vincent improve stewardship of resources. Responsible for coordinating efforts to promote and maintain effective utilization of hospital resources, the task force has helped accomplish the following:

- A reform of MRSA policy by the Utilization Management Task Force and physicians on the Infection Control Committee. After extensive consultation with the Centers for Disease Control, other area hospitals, and the state Department of Public Health, Saint Vincent changed its MRSA policies in several ways. The hospital now places MRSA patients in contact isolation rather than strict isolation, which saves money because fewer precautions are required. In addition, procedures now prevent unnecessary delays in taking cultures, facilitating timely release of patients.

- Hospital staff also work closely with the nursing home personnel to share information about individual patient's needs. The nursing home now accepts some MRSA patients when it can do so without compromising care.

- Implementation of a nonacute-day reporting system. This system identifies delays in discharge and the reasons for these delays so the hospital can develop strategies to reduce unnecessary utilization of hospital resources. Utilization management nurses review a record, identify possible nonacute days, and investigate the case further. Nonacute days resulting from physician practices are reviewed and verified by physicians.

Continued on page 56
Presenters emphasized the importance of distinguishing legal issues from medical and ethical issues.

- Results of a survey of the nine DCNHS-EC local health ministries (and two other related Catholic hospitals) to determine what they are doing to address appropriateness of care and resource utilization issues at the patient care level (see Box, pp. 28-29)

The workshop sessions highlighted the need for explicit discussion of such important issues as the true goals of medicine, public expectations regarding patient care, and assumptions about patients' rights to demand treatment and physicians' rights to refuse to provide unnecessary or futile care. Presenters stressed the need for objective feedback on practice patterns and meaningful research on technology assessment and outcomes. They also emphasized the importance of distinguishing legal issues from medical and ethical issues.

**CONTINUING DIALOGUE AND COMMITMENT**

To ensure appropriateness of care and ethical use of resources, we need to involve all interested parties in a dialogue on these issues. These constituencies include physicians, nurses (and other care givers), patients and their families, managers, board members, lawyers, ethicists, and the community.

The process also requires a sustained commitment to action. To date, DCNHS-EC and its nine local health ministries have only initiated the dialogue and laid a foundation for future work in improving appropriateness of care and the ethical use of resources. Some of our next steps include the following:

- Accomplish at least one objective in each DCNHS-EC health ministry in fiscal year 1993 that demonstrates improved appropriateness of care (e.g., implementing case management and patient treatment protocols, new data bases for assessing outcomes of selected procedures, or new procedures to improve appropriateness of laboratory testing)

- Use annual planning and budgeting review sessions to assess performance on such objectives and to routinely review accomplishments in annual sponsorship reports

- Develop more specific cost, utilization, and productivity targets

- Continue developing and sharing comparative data on treatment profiles for specific surgical procedures through DCNHS-EC's Performance Enhancement Steering Committee

- Facilitate working sessions for DCNHS-EC managers who maintain their institutions' case-mix information systems to improve our use of the systems and to make information more accessible to those who need it

- Work with DCNHS-EC physician and executive leaders to present additional workshops on appropriateness of care and resource utilization

- Update and readminister the survey of DCNHS-EC healthcare institutions

The support of local management, governance, and physician leaders is critical to the region's ongoing dialogue on appropriateness of care and resource utilization. With this sustained effort and commitment, we hope to be able to document, measure, and evaluate our progress over time.

**INTERESTED PERSONS MAY BORROW VIDEOTAPEs OF WORKSHOP III OR OBTAIN COPIES OF THE SURVEY FORM AND SUMMARY OF RESULTS BY CONTACTING RONALD L. MEOd AT 812-963-3301.**

**IMPROVING UTILIZATION**

Continued from page 37

days caused by a delay in service or procedural problem may or may not require physician review. Finally, the utilization management committee reviews causes of nonacute days and recommends steps to eliminate them.

- Completion of a transitional care study to identify the benefits of transferring medically stable Medicare patients to the Skilled Nursing Facility. Two physicians reviewed 30 cases chosen at random from a one-year period and identified the point at which patients would have been medically stable enough for transfer. Two nurses, familiar with operation of skilled nursing facilities, also reviewed these cases to determine which of these patients would have been eligible for skilled nursing. The study identified possible benefits for this hospital of changing patterns of utilization in this critical area.

**A SUCCESSFUL PROGRAM**

Saint Vincent's efforts have been highly effective. Medicare average length of stay dropped from 7.47 days in 1990 to 6.74 days in 1991. By the end of June 1992, the average had fallen to 6.31 days.

These reductions have not only helped Saint Vincent improve its bottom line, they have also heightened hospital managers' awareness of the importance of supporting physicians in their efforts to provide high-quality care to patients. By looking closely at variations in practice patterns and providing systematic support to the medical staff, Saint Vincent has been able to steward scarce medical resources and at the same time enhance the quality of its services.

As the medical review officer and staff physician Thomas E. Brewer recently commented: "Quality is inevitably enhanced when a hospital looks closely at variation in practice patterns and systematically provides supports to its physicians so that the causes of variation can be better understood."

The authors dedicate this article to the memory of Thomas E. Brewer, MD, medical review officer, who recently died as a result of injuries sustained in an automobile accident.