The administration of chemotherapy in the outpatient setting has the inherent challenge of time constraints, thus requiring efficient use of nursing time. With the implementation of the Medicare Modernization Act, quantifying nursing time is necessary to obtain adequate reimbursement for the full range of services provided to patients by oncology nurses (Halpern, 2004). Tower Hematology Oncology Medical Group (THOMG) is a nine-physician private practice in southern California. The physicians and staff see an average of 150 patients a day in the office, including about 50–60 patients requiring treatment. The volume of patients and the diversity of treatments led us to develop a more efficient way to schedule patient visits. We developed a patient-classification system that we believe accurately addresses the patient care and staffing needs for our professional practice model.

**Background**

The implementation of diagnosis-related groups stimulated design of patient-classification systems in the inpatient setting by forcing healthcare providers to become more financially accountable for the cost of care. Early efforts to quantify repetitive tasks that could be standardized, measured, and timed led to a wave of attempts to measure the nursing time involved in patient care (Malloch & Conovaloff, 1999).

Since 1990, chemotherapy administration has shifted from primarily the inpatient setting to physicians’ offices and the outpatient setting. In addition, changes have affected the complexity of chemotherapy administration, including:
- An explosion of new chemotherapy agents
- Complicated treatment regimens and protocols that require multiple premedications
- Newer targeted therapies that cause infusion-related side effects, requiring closer monitoring

As a result of this transition from inpatient to outpatient care, where time constraints have to be taken into consideration, a patient-classification system is essential for planning and providing safe and effective care. An abundance of literature addresses inpatient-classification systems and staffing guidelines. However, very little has been published for the outpatient setting.

**Defining the Problem: A Need for Scheduling Guidelines**

In the summer of 2001, in our roles as the newly appointed nurse manager and clinical director at THOMG, we identified the pressing need for the implementation of a relevant patient-classification system that would improve scheduling of chemotherapy for patients in our busy ambulatory practice. Although data about patient wait times, nursing staff overtime, and patient and physician complaints had not been collected prior to the implementation of the project, subjective information highlighted the pressing need. Frustration levels were high among staff, and job satisfaction was at risk (Gruber et al., 2003).

THOMG had a scheduling system that consisted of a grid with five columns, each representing a 10-hour nursing shift and allowing for scheduling patients at 15-minute intervals. This was a “fixed” system in that it did not reflect the actual number of nurses working on a given day or their actual hours worked. In an attempt to regulate the number of patients to be seen by a single nurse, the schedule was limited to 10 patients in a 10-hour shift, thus the schedule was “closed” when all nurses had 10 appointments each. Additionally, some days four to six nurses were scheduled to work, and several nurses worked 8-hour versus 10-hour shifts. A major problem was that the differences between the types of treatments and the timing of visits were not addressed in the fixed schedule. Patients routinely were double-booked and given whatever appointment times they requested. Scheduling of patients in no way matched the available resources. Patients sometimes waited as long as several hours for their treatments or were late for their scheduled appointments. The noon hour was blocked off in all of the columns despite the fact that patients remained in the treatment center during those times. Nurses seldom got a dedicated lunchtime and often did not leave the treatment center for more than a 15- to 30-minute break.

The system resulted in aggravation and inefficiency on many levels. The physicians, patients, and staff were frustrated that the patients were delayed. The physicians could not schedule patients when the treatment center schedule was closed to additional appointments, and staff could not determine easily whether openings were available. The nurses could not plan effectively and safely for the care they would provide and often did not get a lunch break.

**Getting Started**

In October 2001, the nurse manager attended the Oncology Nursing Society’s Leadership Development Institute (LDI) and chose the scheduling problem as her project. The efforts for change were supported strongly by the physicians and employees at THOMG. The Leadership Challenge Planner (Kouzes & Posner, 1999), the workbook used at the LDI, served as a resource for planning the project. One of the exercises in the workbook requires identification of the stakeholders in the project. In completing this exercise, the nurse manager realized that almost everyone at THOMG had a stake in the project’s success. The nurses would be able to complete their jobs safely and more efficiently. The patients would be treated in a more timely manner, which would result in improved satisfaction. Having more satisfactory experiences would make patients more likely to participate in their care and recommend the physicians and services to others in need. Efficient and thoughtful planning