

The Park Nicollet Experience in Establishing a Hospitalist System

Richard B. Freese, MD

A hospitalist system was developed at Park Nicollet Clinic in 1993, was implemented in 1994, and remains in existence today. It was established without knowledge of any other similar program in the United States. Internists and family practitioners were given the choice to continue to care for hospitalized patients or to become totally office based. The new system has met with good patient acceptance along with increased physician satisfaction and retention. This paper describes some key aspects of the institution of the system in a multispecialty group that includes both family practitioners and internists.

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From Park Nicollet Clinic, HealthSystem Minnesota, St. Louis Park, Minnesota. For the current author address, see end of text.

In January 1994, after nearly a year of discussion, fact finding, organization, and implementation, the general internists and family practitioners at Park Nicollet Clinic in St. Louis Park, Minnesota, created a hospitalist service. Because we were one of the first and largest multispecialty groups to reorganize our delivery system in this fashion, the change attracted considerable attention. Over the past few years, questions from those seeking to learn more about our system have generally centered on three themes. First, practicing physicians have been concerned about clinical quality, patient acceptance, and patient satisfaction. Second, insurance companies, health maintenance organizations, and hospital administrators have tended to be interested in cost and outcome measurements. Finally, physician leaders and group administrators have asked about implementation of and reaction to the hospitalist system. Put simply, their usual question is, "How did you get 73 physicians, at 10 different sites and in two different departments, to agree to embrace this new model of care?"

This paper begins by discussing the third issue and then provides data related to the first two issues.

The System before 1994

In 1993, Park Nicollet was a "physician owned, professionally managed" group of 380 multispecialty physicians. We admitted most of our patients to Methodist Hospital, a 350-bed facility in western Minneapolis. (In 1995, Park Nicollet merged with Methodist Hospital to create HealthSystem Minne-

sota, but in 1993, the two organizations were independent of each other).

Park Nicollet's 73 internists and family practitioners using Methodist Hospital were located in 10 offices spread throughout Minneapolis and its suburbs. In 1993, each hospitalized patient at Methodist Hospital was cared for by his or her primary care physician, who was usually a general internist or family practitioner. Subspecialty consultations were requested by the primary care physicians; specialists also admitted patients directly to their own hospital services. Night call and weekend rounding were performed by six call groups. During the day, however, each primary care physician did rounds of his or her own patients. Wachter (1) has described this type of system as a stage I model.

Reason for Change

The impetus for consideration of a change in our method of hospital care in 1993 was multifactorial. A partial list of reasons and circumstances is shown in the **Table**. Of these reasons and circumstances, the most important were dissatisfaction with the uncertainty that each call night would bring and dissatisfaction with the challenges of getting through the postcall day.

Equally important was an honest appraisal of the weaknesses of our previous stage I model. For example, a patient admitted by a covering physician on Thursday night would see his primary care physician during rounds on Friday morning. If the patient deteriorated on Friday evening, he would be seen by yet a different covering physician and would then be "picked up" over the weekend by a fourth physician.

Planning the New System

At the grass roots level, a committee was formed in March 1993 to address inpatient care. The committee's mission was to maximize the efficiency of inpatient care while maintaining or improving its quality. The committee was also asked to increase provider satisfaction by better matching physicians' roles with their skills and interests and to improve outpatient access.

Baseline objective data were critical in designing and gaining "buy-in" to the change. For example,

Table. Factors Motivating the Development of the Park Nicollet Hospitalist System

Delays in the emergency department caused by wait for the primary care physician to arrive to assess a potential admission
Unnecessary admissions resulting from telephone orders from primary care physicians
Preventive, frequently unnecessary consultations with specialists, often called because primary care physicians wanted care to proceed while they themselves were unavailable during the hospital day
Poor clinic access (and resultant patient dissatisfaction) when physicians were called to the hospital or were delayed on morning rounds
Inefficient use of time because of both hospital rounding and travel to and from the hospital*
"Disposition" admissions from the emergency department to the hospital that, if appropriately triaged, could have gone directly to the nursing home
Delayed discharge from the hospital for many reasons (such as no one being available to check test results, consider a consultant's opinion, discuss with case managers, or meet with family members)
Problems with recruitment and retention of physicians who are burned out from juggling office and hospital work
Confusion about physician responsibility for the "unassigned" patient
Education concerns within the family practice residency program, in part because of wide variation in educational quality among the 73 attending physicians
Acknowledgment that primary care physicians varied in their skill and interest in caring for acutely ill patients (this was sometimes associated with physician specialty, physician age, or simply preference and aptitude)
Poor continuity of care
Dissatisfaction with unpredictability

* Commutes from office to hospital ranged from 10 to 40 minutes.

our family practitioners and internists estimated that their baseline average inpatient census was 2.5 per day. When shown that it was, in fact, 1 patient per day, many began to realize how little hospital work they were actually doing in comparison to the energy and time they were expending. Similarly, sharing objective data about the number of admissions per night, the timing of these admissions, and the number of postmidnight telephone calls was a key strategy for obtaining buy-in. Here, too, physicians overestimated their volume by more than a factor of two.

After reviewing this information, the committee developed and distributed a series of "straw man proposals" to each member of the departments of internal medicine and family medicine. Each iteration was a refinement of the best plan to date and was accompanied by a survey soliciting reactions to the proposal. These proposals and surveys served to inform the physicians that the change was being entertained, to engage the physicians in the creation of the service, and to identify potential problems that had not previously been considered. Moreover, these proposals quickly identified the major sources of resistance to the change and the reasons behind the resistance. In retrospect, the value of the straw man proposals and the accompanying surveys cannot be overstated.

The committee used the feedback to develop a formal proposal, which they presented to both departments at multiple meetings, refined, and finalized in October 1993 and implemented in January 1994. The system involved having an attending physician from Park Nicollet Clinic present in the hospital 365 days per year, 24 hours per day. During the day "shift," four attending physicians (general internists or family practitioners) cared for an average of 17 inpatients per day. Initially, one of these internists gave up her outpatient practice and was totally hospital based. A physician with this type of role was subsequently termed a "hospitalist" (2), although the term was unknown at that time. Over the past 3 years, the system has grown in popularity and now encompasses six "services," four of which are staffed by full-time hospitalists. The other two services are staffed by rotating internists and family practitioners who leave their outpatient practice for at least 1 week at a time, in what has been described as a stage II model (1).

Before implementation, we carefully considered the level of acceptance that would constitute adequate endorsement for proceeding. After extensive discussions, the planning committee decided that each department had to have 75% endorsement and 90% acceptance for the change to occur. Put another way, we were prepared to tolerate the resignation of as many as 10% of physicians rather than let a few persons stand in the way of implementing a systemwide change. The final vote was 66 to 4 in favor of trying the change. Two of the 4 dissenters indicated that they would leave the clinic because of this change, but 5 years later, they have not done so.

Implementation and Measurements

An appreciation of the difference between random fluctuations in measurements and a true change caused by a specific intervention is important in shepherding such a large system change (3). The temptation to tamper at the first sign of discontent is strong. At such times, we found it important to recognize that the previous system had had its own problems, to "make do" and "fine tune" where feasible, and to measure results.

Key to the acceptance of this system was the fact that it was a grass roots change based on data gathered by peers and presented in a believable, reliable way. Individual discussions with resisters was very beneficial. The usual source of resistance was either a misperception of intent (for example, "Administration is just trying to make us work harder") or a misunderstanding of data (such as, "We average 12 admissions per night").

We allowed physicians to choose whether to con-

continue to care for hospitalized patients. Approximately two thirds of family practitioners and one third of general internists chose to stop providing care for hospitalized patients and thus became totally office based. These physicians tended to be older practitioners or those who recognized their limitations in hospital-related skills or interest. This free choice promoted the popularity of the system among physicians. The rest of the physicians either became our hospitalists ($n = 2$) or participated in the rotation services ($n = 38$).

Since implementing the hospitalist-based system, we have seen great improvements in both retention and recruitment at Park Nicollet. In the 4 years before the institution of the hospital service, five "unwanted" resignations (among 42 physicians) occurred. In the first 4 years since the institution of the hospital service, the department of general internal medicine lost no physicians to causes other than death, retirement, or termination.

As we redesigned the system, the single biggest unknown was whether inpatient care from a hospitalist instead of a primary care physician would be acceptable to patients. We were more confident that the quality of patient care would improve and that cost savings would be realized. To measure the effect of these variables (especially patient acceptance and satisfaction) on the change, a series of surveys and outcome assessments was done before and after institution of the change. These surveys were not designed with publication in mind, and a rigorous data analysis is beyond the scope of this paper. Nevertheless, the results of the initial surveys and outcome measures did shape the group's response to the change. Thus, to help the reader understand our implementation and how we obtained the buy-in, the data that were given to our medical group are described below.

Inpatients on the family practice and internal medicine service were questioned during a baseline period and two subsequent periods. Only two differences were seen between the prechange and postchange eras. First, postchange patients stated that their "new" attending was not their personal physician; this was a design of the system. Second, there was some confusion among postchange patients as to which physician was responsible for their hospital care; we set out to fix this problem through personal introductions, brochures, business cards, and telephone calls from the primary care physicians. We found no meaningful change in other patient attitudes about quality of care, such as global perceptions of quality or willingness to recommend our facility to family and friends.

Outpatients of the family practitioners and internists were also surveyed before and after the institution of the hospital system. Outpatients under the

new system noted improvements in the ease of making appointments, reductions in waiting time for examination rooms, and improvements in the overall quality of care.

Physicians who participated in the hospital system thought that the new system improved the overall care of patients, their call schedules, and their communication with colleagues. Two years after implementation of the new system, 89% of the internists and family practitioners believed that the new system was "better or much better" than the old system.

Consultations requested of physicians in surgery and medical specialties decreased by 17%. It was our perception that the change to the hospitalist system led to fewer but more appropriate consultations. For example, consider a patient admitted to the hospital with chest pain that is suspected of being cardiac in origin. Under the old system, a cardiologist would have been consulted routinely, even if the patient was stable. The rationale for this was that the attending physician might be miles away if and when the patient deteriorated and thus that an "anticipatory" consult was desirable. The need for this type of consultation dissolved when a hospitalist was constantly available.

It is our impression that "curbside" consultations increased in number. Consultants and primary care physicians alike noted that this was the result of more frequent face-to-face interaction. All physicians agreed that this led to an improvement in inpatient care. Furthermore, the hospitalists required fewer consultations in caring for patients with common inpatient conditions because the physicians rapidly gained sufficient experience to care for these disorders independently.

Consultants in surgical specialties and medical subspecialties were asked their opinion of the hospital service after 6 months of operation. Seventy-six percent thought that the change was "positive to tremendous." Twelve percent (seven physicians in six departments) thought that the new system was detrimental. Follow-up interviews with those physicians showed that, in fact, they generally liked the new system but were afraid that patients did not. They were reassured by the patient survey data. It should be noted that our consultants were salaried; therefore, their incomes did not diminish with the decrease in consultation-related volume.

We evaluated the most frequent diagnosis-related group (DRG) diagnoses seen by family practitioners and internists in 1993. The more expensive DRGs lent themselves to the greatest decrease in charges. When corrected for hospital fee increases, the hospital bill generated for the 12 most expensive DRGs decreased by 25% after the implementation of the hospitalist system. Most of the overall savings

seemed to be due to a decrease in length of stay of 0.64 days per patient. No differences were seen in the ordering of laboratory or radiology tests or in pharmacy charges.

Discussion

In a large, multispecialty group practice in a competitive managed care market, we found that the implementation of a hospitalist system was associated with cost savings and no decrease (and, in fact, some improvement) in satisfaction among inpatients, outpatients, and physicians. As we have described, the change to a hospitalist model met with some initial resistance, especially with respect to the potential loss of continuity of care and a compromise of the "special relationship" between physician and patient. Before we began, many suspected that patients would find this new model unacceptable. Thus, we carefully set out to measure the changes associated with a transition to a hospital service system. Our early focus groups and surveys indicated that if 200 patients were asked whether they preferred to have their personal physician attend them in the hospital, all 200 would reply in the affirmative. If, however, one asks more specific questions about the quality of care and satisfaction of patients who were actually cared for by our hospitalists, no difference is evident.

We found that inpatients generally felt hospitalist care to be acceptable and of high quality, but this does not suggest that the patient-physician relationship is unimportant in individual cases. (For that reason, we encourage our primary physicians to continue to make "social" calls on their inpatients, either by telephone or in person.) It does suggest, however, that the value of this personal contact may be overrated. The lack of continuity, such as it is, is minimized by frequent communication between the primary care physician and the attending physician. Our data support our belief that any disadvantage caused by discontinuity is more than balanced by the advantage of having an inpatient physician constantly available and in attendance at multiple times during the day, if necessary. This advantage has only become more important as the acuity of hospitalized patients has grown and lengths of stay have further shortened.

Of note, most discussions about hospitalists focus on inpatient quality and efficiency but underemphasize potential benefits for outpatients. We find that our model now allows more reliable availability of the outpatient physicians, who can expand their hours and be on time with their first appointment of the day. Moreover, the office day is not interrupted by hospital calls or abrupt summonings to the hos-

pital. Finally, just as hospitalists can focus on hospital-oriented quality improvement activities, the same should be true for ambulatory physicians because they, too, have narrowed their scope of practice.

The major driver in decreasing charges was the decrease in length of stay of 0.64 days per patient per hospitalization. Frequent visits throughout the day, face-to-face interaction with consultants, and coordination with family members and social workers all contributed to this decrease. An unanticipated consequence of this improved efficiency was that the hospital was encouraged to become much more adept at discharging patients at all times of day, 7 days a week.

Our study has many limitations, in part because our primary concern in 1993 and 1994 was to be sure that the system change was acceptable to patients. Had the change been unacceptable to patients, the project would have ended after 6 months. Once the results were disseminated to all of the stakeholders, the hospitalist system became the new status quo. Subsequent changes in the ownership of the hospital rendered further time comparisons uninterpretable. Our simple cost and resource use analysis used historical controls and did not use case-mix adjustment. Despite these limitations, the fact that the concurrent control group (operating independently of the hospitalists but in the same hospital) did not experience a similar decrease in hospital charges and length of stay makes it likely that the changes we saw were due to the institution of the hospitalist system.

The Park Nicollet system does not rely on the use of residents, although residents in family practice and internal medicine have since joined the rounding teams. We feel strongly that the system's cohesiveness depends on the physical presence, 24 hours a day, of attending physicians with a similar culture and a common compensation system. The presence of the overnight physician is key, although the cost-effectiveness of this intervention is difficult to prove. Systems that try to serve multiple hospitals or that have resources insufficient to support 24-hour coverage or discharge capability would have difficulty fully implementing our model. In addition, long-standing cultural or political differences between family practice and internal medicine at many institutions might preclude a united effort to generate the critical mass of inpatients needed to implement such a system.

The transition to a hospitalist system represented a quantum change in our organizational logistics and culture. Key to acceptance of the change was the fact that hospitalized patients did not perceive a change in the quality of their care and that outpatients felt that their care was improved. The change in our hospital system has made the job of

the outpatient internists and family practitioners neither harder nor easier (because their patient panels have grown), but more predictable. The system was instituted at a grass roots level by the physicians for both patients and physicians. The fact that it has had an economic benefit makes it all the more likely that it will endure, at least for the foreseeable future. As we approach the end of the fifth year of the system, the hospitalist model has now become the status quo—and providers would be loath to consider returning to the old system.

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Requests for Reprints: Richard B. Freese, MD, Park Nicollet Clinic, HealthSystem Minnesota, 3800 Park Nicollet Boulevard, St. Louis Park, MN 55416; e-mail, freesr@hsmnet.com.

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