



The Hospital-Based Specialist Program

Hospital-Based Specialist programs are being widely implemented at Kaiser Permanente in Northern California (KP-Northern California). Expected benefits include enhanced quality of care, more efficient utilization of resources, and improved access to clinic-based practitioners. Emerging best practices and significant implementation challenges are described.

During the past several years, physicians have begun to add unusual acronyms to their resumes: HBS (Hospital-Based Specialist), CBS (Clinic-Based Specialist). These initials signal the beginning of a profound change in the organization and delivery of medical services. This article examines the rationale, design, expected benefits, and challenges to implementing these programs, which are being introduced throughout Kaiser Permanente (KP).

Motivating these changes is the value proposition—enhanced quality and service provided at neutral or reduced cost. Why might new initiatives lead to enhanced quality of care? Hospital utilization has been declining for several years—a result of improved preventive health care, use of care maps and practice guidelines, and more effective transitional planning. This decrease in hospital census gives providers less exposure to the broad range of complex, resource-intensive illnesses of the patients who now populate our hospitals. For example, The Advisory Board Company reports that internists nationally manage an average of 22 intensive care cases per year, whereas intensivists manage 610 intensive care cases per year.¹ Maintaining the requisite skills to manage this patient group could thus become problematic for some clinicians.

In addition, although enhancing quality of care is essential, the need to manage resources efficiently is also important. Physicians who focus primarily or exclusively on the inpatient setting will be expected to develop closer, more effective working relationships with important support services which span the continuum of care—transitional planning, social services, skilled nursing facilities and home health. Experience in KP-Northern California has shown that the outcome of these closer working relationships is placement of patients in the most appropriate care setting at the right time. Conversely, high-value ambulatory practices mandate increased accessibility and enhanced continuity of care achieved when physicians are relieved of inpatient responsibilities.

Thus a convergence of important trends is stimulating the development of HBS programs, defined as the concentration of inpatient care responsibilities

among a subset of interested physicians and other providers with particular skills and aptitudes. The HBS team is closely linked with disposition planning services and is strongly supported by the enhanced availability of ancillary services.

Many health care organizations are embracing this concept. Our research indicates that 20% of independent practitioners' associations (IPAs) and one-third of large multidisciplinary groups in California have implemented HBS programs. A new medical society—The National Association of Inpatient Physicians—has recently been formed, and a national conference on HBS practice is scheduled to take place in San Francisco in December 1997. The proceedings of that meeting will be published as a supplement to the *Annals of Internal Medicine*.

How did the HBS program develop at KP Northern California? In 1994, Robert Klein, MD, Chief Operating Officer of The Permanente Medical Group (TPMG), commissioned a workgroup to explore the desirability and feasibility of implementing a regionwide HBS program. An extensive benchmarking survey and literature search was conducted, and several organizations affiliated with hospitals or group practice were contacted. Seven KP Regions were included in the survey: Southern California, Northwest, Texas, North Carolina, Georgia, Hawaii and Colorado. The workgroup solicited information regarding role definitions, staffing requirements, optimal workload, qualifications of HBS practitioners, relationships with other care providers, support resources, management structure, and compensation. Moreover, relevant outcome measures, including utilization in days per thousand members, admission and discharge rate, and length of stay were investigated, as were patient and provider satisfaction data. As might be expected, quantitative, validated data were sparse and published studies virtually nonexistent. Moreover, assigning causality to HBS program interventions for positive financial or health care outcomes was problematic when multiple initiatives were being launched simultaneously. Nonetheless, evidence of early program success was believed compelling enough to warrant further development.

The information obtained from this research was analyzed by a workgroup of TPMG physicians who distilled it into an initial design template. This document was then used by several facilities as a departure point for local planning and implementation efforts (Fig. 1). Currently, nine KP medical centers have implemented HBS programs; the South Sacramento medical center was the first, in October 1995. All our other medical centers are in some stage of planning and development. About half the physicians at these nine facilities

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WILLIAM M. CAPLAN, MD, is the Director of Operations Development for The Permanente Medical Group. He is a board certified Endocrinologist at the Martinez Medical Center, and lives in Lafayette with his wife and two children.



practice solely in HBS status. Programs are generally expected to continue evolving toward full dedication to HBS practice. HBS physicians are drawn mostly from internal medicine and family practice specialties; less commonly, they are drawn from emergency medicine and (rarely) pediatrics. Hours of operation range from 9 to 24 hours, and most facilities rotate night coverage among all members of the department of medicine. Intensivists are incorporated into HBS teams at three facilities and are strongly linked at others. In addition, HBS programs may incorporate nurse practitioners, discharge planners, and transitional care planners. Thus, the program in KP-Northern California is characterized by significant variability. Ideally, use of standard methods to measure outcome will lead to recommendations regarding best practice and optimal approach.

What have we learned so far from these initial efforts? Optimal workload during the startup period

appears to be 10 to 12 patients per physician daily, a patient census which translates into a 10 to 12-hour workday when admitting and discharge responsibilities are included. As physicians become more efficient owing to support by an array of ancillary services, patient census may increase but typically does not exceed 16 patients per physician daily. Experience has indicated that 50/50 practice splits become increasingly difficult to manage and certainly do not enhance continuity and availability in the outpatient practice setting.

Segregating hospital-based physicians from clinic-based physicians mandates fully effective communication links and mutual support. Experience from around the country indicates that the lack of consistent, reliable systems to ensure timely sharing of information is the "Achilles heel" which often leads to program failure. All sites of care—including hospital, clinic,

Facility	Start Date	Staffing*	% dedicated to HBS Team	Service hours	Service population	Mean daily medical/surgical census
1	10/95	1 2 44	Admit only 100% Round only 20% Round only 5%	12 7am-7pm	137,000	45
2	1/96	2 8 (GI/Pulmonologist/Cardiologist)	100% 40%	9 8am-5pm	97,000	28
3	3/96	7 6	100% 50%	16 7am-11pm	211,000	90-100
4	7/96	8 3 1	100% 50% 80%	15 7am-10pm	169,000	90-110
5	10/96	5 4	100% Teams 20%	12 7am-7pm	143,000	80
6	1/97	1 15-18	100% 25%-50%	24 8am-8pm	173,000	55
7	9/96	8 3 (Intensivist) 1 (Rheumatologist)	100% 70%	24 8am-8am	191,000	50
8	4/97	9 (Internal Medicine/Emergency) 2 1 (Pulmonologist/Internist)	100% 25% 25%	12 8am-6pm	167,000	40
9	6/97	14 2 (Gastroenterologist) 2 (Rheumatologist) 1 (Pulmonologist)	Round only 25% Call only 40%	5† 7:30am-12:30pm	79,000	8-15

* Primary care except where otherwise indicated.
† Service hours reflect limited average daily census.

Fig. 1. Hospital-based specialist (HBS) programs implemented at Kaiser Permanente in Northern California in August 1997.



"In summary, KP-Northern California is committed to full implementation of the Hospital-Based Specialist system."

skilled nursing facilities, etc.—should have access to critical data such as medical history and physical examination results, discharge summaries, and reports from care manager, laboratory, radiology, and social service departments. Moreover, the above described segregation of HBS and clinical-based practice underscores the need to maintain collegiality and shared purpose that characterizes the successful large multidisciplinary medical group.

One key issue requiring careful management is relocation or dispanelment of patients from clinic-based physicians who will be entering HBS practice. Several key steps for this process have been identified: 1) in reallocating workload, use risk adjustment tools if available to ensure that target panel sizes for remaining clinic physicians are equitable; 2) allow sufficient advance time to mail personal letters to patients, informing them about the transition of their primary care physician and how to select a new physician; 3) create feedback mechanisms (e.g., a toll-free telephone number) to give patients opportunity to respond to these changes.

In addition, operational planning must minimize the multiple transitions ("hand offs") among hospital-based physicians which complicate communication and care planning and which do little to reinforce the sense of familiarity and confidence so highly valued by our members. Patients who will no longer be attended by their primary care physician must be reassured that their hospital care will be directed by inpatient medicine specialists committed to maintaining continuity with clinic-based physicians.

At many of our facilities, recruitment of qualified HBS candidates has been difficult during the startup period. The need to fill empty slots quickly has challenged the attempt to use a highly selective recruitment process; fortunately, however, several of our most successful programs are finding qualified candidates. Common selection criteria include 1) Board certification in internal medicine, family practice, and possibly emergency medicine; 2) exemplary clinical skills; 3) demonstrated efficient and cost-effective utilization of inpatient resources; 4) Advanced Cardiac Life Support (ACLS) certification, technical proficiency at such tasks as intubation, paracentesis, joint aspiration, intravenous line placement; 5) demonstrated interpersonal skills ("patient-friendly"); and 6) professional demeanor. Practice experience is also desirable.

Assessing the impact of HBS programs is complex and challenging. As noted above, reliably quantitating the contribution of HBS programs to declining hospital utilization rates and per member/per month (PM/PM) cost is a vexing problem when multiple interven-

tions are concurrently implemented. Nonetheless, reports from many organizations (i.e., Parke Nicolette in Minneapolis as well as KP-Northwest, KP-Hawaii, and the KP South Sacramento medical center in Northern California) have reported decreases of 20 to 25% in utilization rates in days per thousand members or length of stay. Historical controls are used for these calculations. In our Colorado Division, the cost of care measured as PM/PM has reportedly declined 30% since the HBS program was introduced.

Efforts to develop a comprehensive, valid, evaluation process are now underway at KP-Northern California, and a quarterly "performance-at-a-glance" report is now available. Performance measures include inpatient days per thousand, admissions per thousand patients, average length of stay, hospital outpatient service (HOPS) discharge rate per thousand inpatients, home health discharge rate, skilled nursing facility discharge rate per thousand inpatients, and readmission rate per thousand inpatients. Additional facility-based measures include levels of satisfaction among patients, physicians, and other staff. In the near future, the performance-at-a-glance report will be supplemented by a common reporting system used by all KP-Northern California analytical departments. Cost and utilization will be tracked against all settings—inpatient, skilled nursing facility, home health, and clinic. These internal Cost and Utilization Indicator Reports (CUIR) will aggregate cost and utilization data across the continuum of care. The system will permit analysis of subsets of patients identified by diagnosis (DRGs), commercial or Medicare population, encounter with specific HBS physicians, and sites of care. For the first time, then, we will be able to quantitate aggregate costs as patients make the transition from hospital to other care settings. The CUIR reports will be enhanced by surveys which will assess patients' satisfaction with attending HBS physicians as well as patients' overall satisfaction with hospital stay.

To date, outcome data are limited and preliminary. Number of consultations per thousand patients has decreased significantly at several of our largest programs. Utilization measured as days per thousand continues to follow a downward trend which began before HBS implementation; we therefore cannot yet isolate an HBS program effect, but analysis by DRG may be revealing.

In summary, KP-Northern California is committed to full implementation of the Hospital-Based Specialist system. Variability exists in program design but our intent is to continually monitor and evaluate key performance indicators leading to program improvements. Moreover, we will need to create a structure which

facilitates communication, mutual support, and acquisition and maintenance of the skills required by clinic-based as well as hospital-based practitioners. Most important, we must attend to the personal and professional impact of this profound change in the traditional role of the generalist physician. Communica-

tion, choice, and respect for the values that have drawn us to the practice of medicine are paramount. ❖

References

1. The Advisory Board Company. Run to rigor: competing on cost and discipline. Presentation summary. Washington, DC: The Advisory Board Company, 1997:64.



“Visit to the Plastic Surgeon,” by Evany Zirul, DO, MFA.

Another piece of her work can be seen on page 59.



EVANY ZIRUL, DO, MFA, is an Ear, Nose, Throat and Facial Plastic Surgeon for the Permanente Medical Group of Mid-America, PA in Kansas City, Missouri. She creates drawings, like the one above, and bronze sculptures.