CALL FOR PAPERS

Abstracts are now being accepted for the 10th Annual Congress of the European Society for Medical Oncology to be held in Nice, France, December 7-9. The deadline for receipt of abstracts is June 30.

Contact Prof. M. Schneider, Centre Antoine-Lacassagne, 36 Voie Romaine, 06054 Nice Cédex, France; or call (93) 81-71-33.

RADIOLOGY

A course entitled "The 6th Annual Diagnostic Imaging Seminar: Current Perspectives in Newer Imaging Techniques" will be held at the Harbor View Hotel in Martha's Vineyard, Mass., July 9-13. The fee is $450.

Contact Ms. Janice Ford, Department of Radiology, Hospital of the University of Pennsylvania, 3400 Spruce St., Philadelphia, PA 19104; or call (215) 662-6904.

CORRECTIONS

Massachusetts Medical Society — Deaths (March 1, 1984; 310:593-4). The date of death given for Dr. Arthur L. Gaetani was incorrect; he died on December 22. We regret the error.

Coronary Thrombolysis with Tissue-Type Plasminogen Activator in Patients with Evolving Myocardial Infarction (March 8, 1984; 310:609-13). On page 611 in the right-hand column, the dosage of streptokinase in line 15 of the text should be changed to "250×10^3 to 750×10^3 IU."

Hypomastia and Mitral-Valve Prolapse (April 19, 1984; 310:1053-5). On page 1054, in the table by Liberfarb, Altshuler, and Goldblatt, the fourth row under the heading "Posterior Probabilities" should be changed to read P [MVP(+)/MS(+), P(+)].

SPECIAL REPORT

DECENTRALIZED MANAGEMENT IN A TEACHING HOSPITAL

For more than a decade American hospitals have been asked to contain costs. The most recent program is the Medicare prospective payment system, which reimburses hospitals a fixed price per case based on diagnosis-related groupings (DRGs). If this approach proves successful, it may be adopted by other payers and perhaps extended to the reimbursement of physicians through prospective professional fees.

Hospital reaction to the new payment scheme varies. Some look for cost controls and more efficient management techniques to reduce expenses; others carefully analyze their mix of DRGs to measure which are profitable and which involve unusual and expensive services. The less-profitable services are typically provided by teaching hospitals — institutions that are already a subject of concern because of their high costs and dependence on shrinking public dollars.[1-4]

To survive, teaching hospitals must look to innovative approaches in both medical care and management practice. Medical practices must aim at reducing lengths of hospitalization by performing a higher proportion of the necessary diagnostic tests and therapeutic procedures in outpatient settings. Changes in management practices should encourage physician involvement; most of the costs associated with hospital care result from physician decisions. Given the traditional hospital organizational structure, with central supervision of costs but little control over decisions that affect them, a new management approach is in order. For 10 years Johns Hopkins Hospital has operated with a management structure designed to control expenditures by placing responsibility for costs in the hands of physicians. In this article we briefly summarize that experience.

The Johns Hopkins Experience

Background

Johns Hopkins Hospital opened in 1889 with 330 beds, 25 physicians, 200 employees, and an annual operating budget of about $85,000. The central administration was small. Services related to medicine, nursing, and support functions were each headed by an administrative director.

Over the years the hospital grew in size and complexity. By 1972 Hopkins had 1000 beds, 1300 physicians, 4100 employees, and an annual operating budget of $58 million. The size and titles of the administrative staff had changed, but its organization was basically unaltered. Medical services still reported to a vice president for medical affairs, nursing and support services to a vice president for administration, and accounting and budgeting to the treasurer. Although clinical departments controlled staff appointments, beds, and diagnostic and therapeutic services, they had minimal involvement in budget preparation and limited accountability for financial performance. Expenses originated in the units but were the responsibility of central administration.

To address problems of cost control and accountability, Hopkins adopted a decentralized management system frequently used in industry.[5] This system required more extensive financial and management information and, for the first time, involved physicians in management decisions.

Decentralized Management

With the introduction of decentralized management in 1973, Hopkins shifted operating responsibilities and financial accountability to the clinical departments. Under this structure the larger hospital in effect became a holding company for a series of specialty hospitals referred to as functional units. The organizational design shown in Figure 1 reflects the status of each department as an operating unit reporting to the president of the hospital. Although the direct reporting line of the functional-unit directors to the president is unambiguous, the structure allows most decisions to be made at the level of the functional-unit director and vice presidents, or vice presidents in their areas. Regular meetings occur between the corporate officers and functional-unit directors to ensure a broad under-

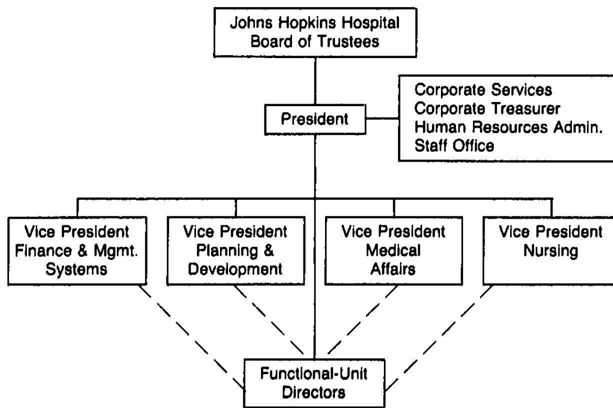

Figure 1. Organizational Design at Johns Hopkins Hospital. The functional units include anesthesiology and critical-care medicine, gynecology and obstetrics, laboratory medicine, medicine, neurology, oncology, ophthalmology, pathology, pediatrics, psychiatry, radiology, and surgical sciences.

standing of policies and decisions and to provide a routine forum for discussion.

As structured, each functional unit is headed by a physician chief who is also the chairman of that department in the school of medicine. Reporting directly to each chief are a nursing director and an administrator. These three function as a management team and are accountable for all direct costs associated with the operation of the unit, including services acquired from other departments, such as laboratory medicine and radiology. Costs that pertain to the operation of the institution as a whole — e.g., central personnel administration, security, accounting, billing, and insurance — are allocated to the functional unit. Each unit may use services such as housekeeping, dietary, and maintenance from central hospital departments, but the unit may also switch to other providers if services of equal quality can be purchased at a lower price. Although outside-purchase options are seldom exercised, competitive pressure requires the hospital to provide good, affordable central services.

Each functional unit must operate within the general policies of the hospital relating to overall institutional goals, capital-resource allocation, personnel policies, and rate setting. Capital allocation is reviewed by a joint committee of central and functional-unit management. Salary guidelines are established centrally to ensure uniformity and parity within the institution. Financial data and data on use of services are maintained in central files and made available to units for budgeting and volume projections. As the units have gained more experience, they have developed individual data sets pertaining to their own use of services and patterns of physician practice. These data are invaluable in the analysis of use and planning for new services.

Ten years of decentralized management at Johns Hopkins have had two major sets of consequences. The first is measured by financial performance. The second is less objective and pertains to the role of physicians who double as managers of institutional resources.

Financial Consequences

Before 1972, more than 80 per cent of the hospital's costs were allocated by central administration. By fiscal year 1983 the allocation pattern was reversed. Clinical departments directly controlled 51 per cent of their expenses, with departmental use (or purchase) of ancillary services such as laboratory tests and radiology accounting for an additional 20 per cent. Overhead expenses and institutional costs amounted to 22 per cent and 7 per cent, respectively.

Trends in unit costs have been used to measure the impact of physician management. Allowing several years for implementation of the decentralized system, the eight-year period from fiscal year 1976 through 1983 shows that the compound growth rate of unit costs at Hopkins was 10.5 per cent — slightly less than the 11 per cent growth rate for all Maryland hospitals and considerably less than the national growth rate of 14.1 per cent. The 10.5 per cent rate represents stable costs if inflation and patient-care volume are held constant. Furthermore, within the rate-setting guidelines of the Maryland Health Services Cost Review Commission, the hospital has been able to retain a positive operating balance in each of the years since 1976. This includes the past seven years, in which there have been the added capital expenses of a complete rebuilding program.

While holding unit-cost increases below state and national averages, Hopkins has continued to grow in terms of overall budget and the ability to support new programs, technologic advances, and new buildings, including a regional oncology center. Table 1 shows the eight-year cost trends. Base-year costs are adjusted each year for inflation, changes in patient-care volume, depreciation, interest on new buildings, cost improvement (productivity increases), new programs, and operating requirements. The new-programs/operational-requirements line shows that an average of 3.9 per cent of base-year dollars are used annually to support new applications of medical science and technology. These include noninvasive diagnostic procedures, advanced radiographic-imaging techniques, automated laboratory testing, and additional patient-care and family-care services.

Management Factors

Decentralized management is not easily implemented in an environment that has traditionally been centralized. The key factors essential to successful implementation are the willingness of corporate officers to delegate decision-making authority to functional-unit management; the assumption of responsibility by the functional-unit directors (physicians who are chiefs of services) for their units; the acceptance and support of the professional nursing staff; the development of management and financial information systems to support decentralization; and the development of ef-

Table 1. Eight-Year Cost Trends (Actual) at the Johns Hopkins Hospital, Fiscal Years 1976-1983.*

	1976		1977		1978		1979		1980		1981		1982		1983	
	$	%	$	%	$	%	$	%	$	%	$	%	$	%	$	%
Base costs in previous years	73,238	—	84,730	—	93,933	—	101,915	—	110,937	—	125,920	—	136,025	—	154,964	—
Inflation-factor cost	5,559	7.6	5,151	6.1	6,363	6.8	6,802	6.7	9,696	8.7	10,908	8.7	12,075	8.9	10,281	6.6
Volume (internal)	1,353	1.8	(27)	(0.0)	78	0.1	980	1.0	1,186	1.1	(2,019)	(1.6)	(634)	(0.5)	3,719	2.4
New programs/ buildings	172	0.2	458	0.5	2,221	2.4	748	0.7	2,874	2.6	156	0.1	835	0.6	1,427	0.9
New programs/ operational requirements	4,911	6.7	5,610	6.6	1,455	1.5	1,302	1.3	3,020	1.3	3,030	2.4	7,644	5.6	7,094	4.6
Cost improvements †	(503)	(0.7)	(1,989)	(2.3)	(2,135)	(2.3)	(810)	(0.8)	(1,793)	(1.6)	(1,970)	(1.6)	(981)	(0.7)	(1,244)	(0.8)
Total costs	84,730	—	93,933	—	101,915	—	110,937	—	125,920	—	136,025	—	154,964	—	176,241	—
Net new programs/ cost improvement †	4,408	6.0	3,621	4.3	(680)	(0.7)	492	0.5	1,227	1.1	1,060	0.8	6,663	4.9	5,850	3.8

*For actual dollar values, add three zeroes to each amount.

†Parentheses indicate negative values.

fective communication between the central administration and the decentralized functional units and within central and functional areas.

The transfer of responsibility must be accompanied by the authority to make decisions. Hopkins' management and trustees were willing to delegate the necessary authority to decentralized management even though the chiefs of services were generally considered to have primary commitments to the academic pursuits of teaching and research. The intent was to strengthen the chiefs' management skills, as well as to make departmental administration a primary activity. Physician involvement in management decisions, policy direction, day-to-day operations, and hospital economics became the norm rather than the exception. In transferring responsibility, the central administration had to redefine its own role. The new role focused on policy development and monitoring functional-unit performance rather than on control through administrators reporting directly to the central administration.

The second key factor is the assumption of responsibility by the unit directors. Although physicians frequently think that hospital administrators are not responsive to their needs and that decisions are not made in a timely manner, they shy away from direct involvement. Although involvement of physicians in management could clarify and expedite the decision-making process, the necessary commitment of time would be in addition to the time required by the traditional responsibilities of the academic physician. To provide needed management support, nonphysician administrators were added to the unit management teams. Nursing directors also assumed increased departmental responsibilities for staffing and budgeting. In addition, each functional unit now has a financial manager and support staff. This team provides financial expertise for both the hospital and the school of medicine, alleviating the need for large central departments.

The effect of this kind of management can be seen in the department of surgery, where the surgeon in chief, the administrator, and the unit director of nursing jointly manage what is in effect a 250-bed hospital with an annual operating budget in excess of $20 million. When responsibility for the school of medicine's budget is added, the total operating budget approaches $40 million, with supervisory responsibility for 1000 employees. The team concept has made it possible to assume this kind of responsibility and has resulted in a management organization that is more accessible than a central bureaucracy.

The third major issue, decentralization of nursing, is potentially the most difficult. Some of the opponents of decentralizing management in large hospitals have been nurses in local and national leadership positions. They may have mistaken perceptions of what decentralization both implies and accomplishes for nursing. Organized nursing seems to believe that it must have absolute control of a centralized budget to protect the position of nursing in the hospital hierarchy and to maintain the professional identity of nurses. Concern has also been expressed about the idea of nurses working for and reporting to physicians.

The professional role of nurses at Hopkins is in fact strengthened under decentralization. The role of nurses in patient care is no more changed in the sense of nursing functions than the role of physicians is changed in terms of direct medical care of patients. The focus is on strengthening nursing management at all levels within the organization. As strong managers placed in a collegial forum among administrators and physician chiefs of services, nursing directors are better positioned to promote the professional practice of nursing. To those who argue that nurses cannot be professionally accountable to physicians since doctors know little about professional nursing, the Hopkins experience is most revealing. The decentralized system has attracted competent nurse-managers who can advocate the role of nursing to administrators and functional-unit directors. They are capable of managing large numbers of people, budgeting resources ap-

propriately, developing strong head-nurse leaders, and evaluating the capability of nurses for promotion. The outcome has been joint decision making in the best interest of the entire functional unit.

Recruitment of directors of nursing is carried out by the vice president for nursing. The chief of service and the administrator in the functional unit make the final selection from among the group of candidates recommended by central nursing. The major functions of the vice president for nursing include setting nursing-care standards, reviewing nursing practice, directing the total nurse-recruitment program, and along with other senior central-management officials, reviewing and approving the budgets and plans of the units. The vice president is also responsible for overseeing the management of in-service and continuing-education programs. Finally, and most important, the vice president for nursing provides institutional leadership for professional nursing by participating in all key central decision making and by setting the tone for nursing practice throughout the hospital.

The fourth issue concerns the provision of meaningful management information to facilitate operational decisions at the level of the functional unit. Information systems in hospitals have traditionally been focused on cost finding to meet the reporting requirements of Medicare, Medicaid, and Blue Cross. Although necessary for effective management, systems to monitor performance have not been widely developed. Through decentralization Hopkins has developed a series of reports that recognize each functional unit as an independent operation. Units receive detailed statements of direct income and expense and reports on resource use, including productive nursing hours and ancillary consumption. On a quarterly basis, units are given case-mix data with indicators of performance, such as total charges and length of stay by DRG. A fully allocated profit-and-loss statement is prepared to determine how each service performs as an independent financial and operating entity. Building these information systems has been time-consuming and expensive and has required a major commitment from central management. However, the information generated is critical to the success of the decentralized approach.

The final issue is communication. At Hopkins communication revolves around a highly structured planning, budgeting, and monitoring process. Each fall central administration circulates budgeting guidelines and timetables, asking each functional unit to develop goals for the next year within the constraints of the economic climate. The units then prepare their budgets for a subsequent detailed review, based on projections of occupancy, use of services, staffing, and cost inflation. Units are also asked to prepare five-year plans (updated annually) and to review any proposed new programs, other additions to their expense base, and plans for cost reduction. Budget meetings between representatives from central management and the functional-unit management team result in an annual operating plan, presented to the board of trustees each May. The units receive monthly and quarterly reports of operations, based on performance measured against the operating plan. These reports are discussed with the units and in the professional groups of the hospital, such as the medical board. The meetings of the board of trustees are open to all functional-unit directors, allowing them to interact directly with the trustees and central management.

The development of management-information systems has lessened but not eliminated the problems in communication between central administration and the functional units. Gaps in understanding result from a lack of coordinated effort among corporate officers (e.g., officers of finance, planning, and medical affairs) and between central and functional-unit managers. Regular communications, as well as ad hoc problem-solving meetings, are essential.

Discussion

The decentralized management system at Hopkins has been effective in involving physicians in budgeting and budget management. The process is now moving forward to allow decentralization of both revenue and expense budgeting. The intent is to have the process evolve in a manner conducive to budgeting both revenues and expenses by case or DRG. Positive operating results achieved through control of expenses, case-mix adjustments, and reduced levels of unnecessary care will then be translated into support for clinical programs, new technologic procedures, and higher-quality patient care.

This approach recognizes that decisions to bring patients into the hospital, to prescribe courses of diagnosis and treatment, and to discharge patients generate the majority of hospital expenses. Decentralized management gives the institutional responsibility for these decisions to those who make them — the physicians. Management strategies aimed at reducing lengths of stay and controlling the use of ancillary services are then more likely to be successful because they are directed by physician-managers who can influence the behavior of their colleagues.

Robert M. Heyssel, M.D.
J. Richard Gaintner, M.D.
Irvin W. Kues, M.A.
Ann A. Jones, Ph.D.
Steven H. Lipstein, M.H.A.

Johns Hopkins Hospital
Baltimore, MD 21205

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