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Is There a Role for the Physician in Technology Acquisition?

Do physicians decide distribution of equipment—both high technology as well as some low technology—within the national Kaiser Permanente (KP) system? The answer is an unequivocal yes, given certain limitations such as finite financial resources. We describe the experience of two such committees, both having operated for many years in the KP Northern California Region and now enveloped by a national organization, the KP National Purchasing Organization (NPO).

National Model

The NPO, which currently operates in over 40 commodity lines, aims not only to lower prices nationally but to improve standardization and utilization of products. This new approach to purchasing should result in substantially improving the level of quality and service nationally. Physicians have a key role to play in this realignment; however, unless they actively participate, they run the risk of abdicating their responsibilities in favor of nonphysicians. In today's marketplace, smart procurement is key to successful outcomes.

Sometime in 1995, strategic sourcing was recognized by KP as an accomplishable opportunity. Given the size of this KP national organization—which has more than 400 strategic contracts in place, sometimes conflicting with one another—and with an annual budget of close to \$4 billion, the opportunity to simplify and use our leverage to provide greater service at less cost was an opportunity not to be missed. Two major areas of purchasing were medical imaging equipment and equipment for anesthesia and for patient monitoring. Moving the supplier base to fewer suppliers with higher performance became substantially more important. We would like to distinguish technology acquisition from technology assessment, which is an entirely different process (see Mitchell Sugarman's article, p 46, this issue); however, as with most things, substantial overlap prevails.

Northern California Example

During the past 30 years, the high-technology edge in diagnostic medicine has, without question, resided with medical imaging. This phenomenon is evidenced

by the prices asked, both for equipment acquisition as well as for individual tests. Computed tomography (CT), magnetic resonance imaging (MRI), positron-emission tomography (PET), interventional radiology, marked advancement and enhancements in ultrasound, digital x-ray imaging, teleradiology, picture archiving communications systems (PACS), and filmless departments have all blossomed in the past decade—rendering the imaging department the center of any medical enterprise.

The Kaiser Permanente Medical Care Program in Northern California provides care to more than three million members, employs nearly 4000 physicians, and includes a network of 17 hospitals and multiple clinics. Equitable distribution of imaging equipment to these hospitals and clinics while using consistent criteria has always been difficult. The 1980 establishment of a small physician committee, ably supported by personnel in the bioengineering, purchasing, and construction departments, has resulted in equitable, rational distribution of finite resources. The process used by the Medical Imaging Equipment Committee has been accepted by most radiologists in the Region and has gained enthusiastic support from senior management.

Although technology acquisition committees have gained considerable ground among many of our competitors, the long process necessary to create a workable committee with a consistent philosophy while retaining credibility with the population served is innovative in many respects. All members of the committee were initially selected to represent various characteristics (ie, size and location of facilities as well as radiology subspecialties). Through the years, the committee has developed a cohesiveness that has played a large role in establishing the committee's credibility—particularly because the physician-chiefs of the various radiology departments understand clearly that serving on the committee is not necessarily advantageous (ie, because their facility requests may then be scrutinized more comprehensively than others).

The committee's philosophy centers on amply and appropriately justifying all requests by providing accompanying demographics and by clearly establishing need. Life-cycle costs are as important as the costs of acquiring equipment. In addition, productivity and

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efficiency of the potential acquisition are keys to success: Systematic analysis of accompanying patient data to assure that the potential equipment will be used efficiently and effectively are among the most prominent criteria considered. Quality and cost-effectiveness of the equipment are additional considerations. This process of rationally considering both clinical and economic returns on investment has resulted in multiyear sole source contracts for imaging equipment: Contracts are currently shared by General Electric (for CT and MRI equipment), Phillips (for angiographic equipment as well as general radiology and fluoroscopy rooms), and Acuson (for high-end ultrasound equipment).

Lessons Learned

What lessons have we learned from this experience? The strict policy of impartiality and freely distributed equipment allocation decisions has kept everyone from worrying about unfairness. We have found that early establishment of rational, easily understood criteria was critical, as was balancing that simplicity with the need for responsiveness through flexibility. We learned to listen attentively to the justifications provided and to render decisions in an easily understood, logical sequence—yet be flexible enough to amend decisions whenever arguments are persuasive enough to overcome set criteria.

Flexibility also means the ability to respond to concerns as they arise. As tenure of committee members increased (because of the need to retain both consistency and corporate memory), concern for the need to have “new blood” arose. New committee members were then introduced on a rotating basis, allowing experience to coexist with new involvement.

This system has served as a model for similar equipment assessment and acquisition committees for laboratory medicine equipment; patient monitoring equipment; anesthesia equipment; computers; and equipment for nuclear medicine, cardiology, and other specialties. The system served as an establishment point for the NPO. The KP National Imaging Committee has representatives from both the Northern and Southern California Regions as well as the Northwest, Hawaii, Colorado, Georgia, and the Mid-Atlantic Regions. KP Ohio has declined representation, after the original representative left. Criteria similar to that used in the KP Northern California Region model are used. The committee is assisted by several subcommittees that include representatives from several KP Regions.

MRI Acquisition

The rational distribution of MRI machines as a function of efficiency and access in the multihospital system of Kaiser Permanente in Northern California serves as a good case example. When MRI was first introduced in the early 1980s, we were well positioned to assess our potential needs. Our size and the corresponding potential volume of scans secured very competitive rates—more than 50 percent lower than prevailing community rates. As use increased, we installed machines at permanent sites in our neurosurgical service facility and in the four largest centers, having first secured an understanding from those facilities that they were to serve as subregional centers for MRI.

To increase access to the equipment among the remaining facilities and to maintain accountability and competence (especially among our younger radiologists), we explored alternatives to a fixed-site installation. Utilization of the equipment had increased to the point that an external mobile service would be both advantageous and appropriate. Our mobile contract, which persists to this day, allows for the current installed base of 12 permanent units and five mobile sites, incurs a very competitive price per scan, and allows us use of a wide-bore machine for obese and claustrophobic patients.

Its credibility and acceptance well established, the committee saw its role as arbitrator enhanced with introduction of the mobile service. Assignment of days and times and effective utilization monitoring enabled us to derive the most from this mutually beneficial contract. This result enabled us to review the needs of the smaller facilities in a slower, more rational manner as we budgeted for eventual permanent installation of MRI machines in all facilities.

In summary, given the context of finite resources, a rational plan for distributing MRI units has resulted in permanent installation of MRI equipment in about two thirds of our hospitals and in MRI services provided by a contract mobile service in about a third of our hospitals. We are currently assessing the need for more than one machine at our larger facility. Our budgetary process has been enhanced by moderate diffusion of this technology throughout the KP Northern California Region. Most importantly of all, our patients' easy access to MRI services enhances the services and quality of care they receive.



Expansion to Other Technologies

A similar process has occurred with two other committees (ie, the KP Anesthesia and Patient Monitoring Committees), which were formed in 1989 after five years of standardization attempts by the Chiefs of Anesthesia in the KP Northern California Region. These committees arose out of the success of the Chiefs in achieving standardized cost reductions in the purchase of pulse oximeters, capnography equipment, anesthesia machines, and assorted disposables. As a direct result of these initial successes, the committees have been involved in developing and designing diverse types of equipment in conjunction with multiple vendors. The immediate payback has been substantial: decreased costs of acquiring equipment, establishment of an in-house parts inventory with no cost to us for servicing most of the installed equipment base, and national recognition for the knowledge and negotiating skills of several participants.

Since advent of the Anesthesia Committee, cost savings for anesthesia machines has been outstanding. We estimate that national deployment of the established standard has resulted in savings of at least 45 percent and has given us the option of exchanging the new installed equipment base for the next generation of equipment at minimal cost.

Similar processes are in place in the Patient Monitoring Committee and have resulted in major savings: The installed equipment base is upgraded only

when appropriate on the basis of substantial technological advances.

Conclusion

We have described Kaiser Permanente's intent to refashion itself into a smart, selective buyer of supplies and technology by taking a new approach to purchasing. This activity has resulted in substantial savings during the past four years and, we hope, has improved the level of quality and service and has markedly increased compliance with our product formulary.

We have found strength in numbers. We have also enhanced value for our members, more strongly affected acquisition decisions, and negotiated major discounts for many types of equipment. Standardizing our use of fewer and stronger suppliers has provided us with strong pricing and other value-added enhancements while our suppliers increase their market share and develop both a more stable environment and a better working relationship with KP. And our physicians have been in the front lines, leading the charge! ❖

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Related publication:

Tan KM. Physicians decide distribution of group's imaging equipment. In: Innovations '92: models for cost management and health care quality. Tampa, FL: American College of Physician Executives; 1992; p 108-9.

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Other People

"There was a man who believed all his endeavors to be the result of his self-determination and self-reliance. He had very little gratitude."

M Scott Peck, "Golf and the Spirit," Three Rivers Press