

Healthcare FINANCIAL MANAGEMENT

INTEGRATED DELIVERY SYSTEMS

Achieving Functional Integration: A Continuum Case Study

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Inova Mount Vernon Hospital, a part of the Inova Health System in northern Virginia, has developed a plan to redesign its joint replacement service to better coordinate patient care across the entire continuum. The redesign incorporates services, such as presurgery therapy and patient education, registration and insurance activities, rehabilitation, and home care, into an existing acute care joint replacement clinical pathway to create a continuum of care.

To encourage the provider partners to integrate the joint replacement service, Inova Mount Vernon Hospital developed new types of clinical, economic, and service outcome measurements to view episodes of care from a system perspective. These measurements will be used to assess the success of the functional integration effort.

Integrated delivery systems (IDSs) continue to be created to meet the healthcare market's need for improved operational efficiency and quality care. As systems are formed and patient care delivery is restructured, provider organizations within systems experience revenue and margin transfers. Often, these transfers, which might have been alarming when an organization functioned as a stand-alone entity, are a necessary part of creating a well-functioning continuum of care.

As stand-alone entities, provider organizations have their own strategic plans, budgets, and performance measurement mechanisms; they vie with other provider organizations in the same market for survival. But as components of IDSs, provider organizations must make fundamental changes in outlook. They must learn to function as components of a continuum of care and must make the trade-offs needed for the system to

function at maximum efficiency and deliver services that their customers perceive to be integrated.

Creating a Continuum

Inova Health System is an integrated delivery system in northern Virginia. The system has equity and employment relationships with 100 physicians and comprises three hospitals, several urgent care centers, a home health agency, two skilled nursing facilities, several outpatient therapy sites and other entities. Inova has launched an initiative that will redesign all clinical services offered by its member providers to create an integrated continuum of care.

One of Inova's member providers, Inova Mount Vernon Hospital, a 235-bed facility in Alexandria, Virginia, has undertaken to develop a continuum of care by redesigning one of its own clinical services. Inova Mount Vernon selected its joint replacement service

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as one of the first clinical services to be redesigned because it is one of the hospital's key service lines and because a well-defined acute care clinical pathway for joint replacement already existed that could serve as the basis for continuum development.

Reaching consensus on a recommended design for the joint replacement service took seven months; implementation of the plan is currently underway. Inova Health System regards Inova Mount Vernon's redesign plan as a potential model for its overall, systemwide design effort.

Redesigning the Joint Replacement Service

As the first step in its redesign initiative, Inova Mount Vernon Hospital developed a strategic business plan. An assessment of the healthcare market in metropolitan Washington, D.C., indicated the need to design a joint replacement service that would minimize adverse changes in reimbursement in the short term but, more importantly, prepare for the inevitable shift toward global pricing and capitation.

Although an aggressive, acute care pathway already was in place, the joint replacement service had to be redesigned to incorporate other required core services along the entire continuum (eg, presurgery therapy and patient education; demographic intake, registration, and insurance certification; surgery and immediate postoperative care; rehabilitation; home care; and case management).

The business plan consequently defined the desired continuum as a pathway that would include the following provider partners:

- Orthopedic surgeons, who would supervise acute care and direct care in other settings;
- Primary care physicians, who would identify candidates for joint replacement and provide medical authorization for surgery;
- The hospital, where surgery and immediate postoperative care would take place; and
- Skilled nursing, outpatient therapy, and home healthcare providers, which would render follow-up care and rehabilitation.

Inova Mount Vernon developed an operational strategy for integrating care among the system's acute care, home health, skilled nursing, and outpatient organizations. The service was redesigned by a 16-member team of clinicians, physicians' office staff, and administrative and patient care staff from the hospital, outpatient services, postacute services, and the home health agency. To improve outcomes across the continuum, fundamental changes were made in clinical assessment and treatment, service delivery, and cost management.

Changes included the development of a cross-organizational therapy team dedicated to meeting all patient needs in the most appropriate setting, regardless of where treatment traditionally had been provided, decreasing clinical and administrative fragmentation, increasing patient satisfaction, and broadening the clinical pathway for joint replacement to encompass the entire continuum.

Insurance certification was centralized, case management was made more comprehensive, and more nursing time was allocated to direct patient care by implementing clinical documentation by exception. History tak-

ing and physical examinations were centralized in the hospital and were conducted by one physician to improve consistency and provide better and quicker access to diagnostic data. Patient registration and discharge planning were centralized, and home nursing and physical therapy visits were consolidated. Computer links were established between all provider sites so that clinical and nonclinical information could be easily and efficiently shared.

To ensure and maintain support for the redesign effort, Mount Vernon assembled its continuum partners frequently to inform them of some of the positive—and negative—financial outcomes that might occur as a result of the redesign; resolve complaints; identify and reinforce the value of excellent healthcare practices; and discuss specific clinical and administrative improvements that could be addressed in the redesign.

Financial Implications

Providers in northern Virginia deal with a variety of payment mechanisms, including case rates, per-diem payments, and discounted fee-for-service. Because Inova Mount Vernon operates in a mixed market of fee-for-service and managed care, partners in the continuum would experience financial gains or losses depending upon how joint replacement service functions were eliminated, consolidated, or shifted from one setting to another. For example:

- Performing all histories and physical examinations in the hospital would reduce primary care physicians' revenue;
- Consolidating home care visits

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would reduce home health agency costs and revenue for noncapitated patient populations;

- Consolidating insurance certification would raise hospital business office costs but reduce costs for physicians' offices, the home health agency, and other hospital departments.

The hospital stands to lose the most financially as care moves to the lowest-cost site. Because of decreases in outpatient volume and revenue, the hospital's equivalency (outpatient to total revenue) ratio will decline, adversely affecting costs per equivalent-day or costs per equivalent-admission. Reduction in inpatient lengths-of-stay would reduce fee-for-service revenues and eliminate low-cost days at the end of a patient stay. As a result, the hospital is prevented from offsetting expenditures for the high-cost operative and early postoperative days under per-diem contracts.

Because of the hospital's high fixed costs, its profit margin would suffer because potential inpatient and outpatient volume declines would not necessarily cut costs commensurately. In addition, the hospital would absorb redesign expenses associated with the centralization of functions in the hospital and establishment of computer links for information sharing within the continuum.

Redesigning Performance Measurements

For functional integration to be effective, changes in accountability for outcomes of each affected network provider must be instituted, and performance measurements must be developed to assess the progress and suc-

cess of the redesigned joint replacement service. The redesign plan, therefore, included methods for measuring performance that reinforce a team approach to providing care.

Developing appropriate financial performance measurements for the joint replacement service redesign has been a formidable challenge. Each provider in the continuum knew how to assess its own costs, but none knew what it would cost to provide care across the entire continuum. One reason for this situation was that all facilities in the continuum do not collect financial data in the same way. Healthcare cost accounting systems in hospitals reflect acute care cost structures and resource utilization, but other types of healthcare providers do not collect the same types of financial data that hospitals collect.

In addition, providers in the continuum had not assessed how they treat joint replacement patients differently from other patients or what the most efficient way of treating joint replacement patients to achieve the best clinical and financial outcomes might be. Therefore, there was little consistency in costs incurred or outcomes realized from one healthcare setting to another.

From a financial standpoint, Inova Mount Vernon Hospital realized that a continuum-based joint replacement service's performance needed to be measured in a new way. The hospital, therefore, utilized activity-based costing (ABC) because it provides a more refined method of determining cost drivers and takes into consideration all the factors associated with the processes of care that influence costs.

Inova Mount Vernon has begun to develop cost and revenue mea-

surements for an entire episode of care. Once this task is completed, each partner in the continuum will be held accountable for a targeted component cost per patient, which can be assessed using ABC. While each provider partner along the healthcare continuum will need to maintain its own budget and financial indicators, economic disincentives will result if each partner concentrates only on its own financial performance without regard to the need for functional integration.

Service performance measurements also were assessed and retargeted. The registration and insurance certification process, for example, had nine different points of contact between members of the joint replacement service and insurers and required approximately eight worker hours to complete. Inova Mount Vernon Hospital set two improvement targets: to reduce the number of contacts to two and reduce the time involved to 1.5 hours.

Because clinical and service outcomes occur at various points across the continuum of care, each partner, department, and individual caregiver will be held accountable for patient satisfaction and clinical quality indicators that support the program. Incremental volume increases that occur when the joint replacement service partners meet payers' contracting needs also will be measured.

Performance will not need to be measured at regular intervals, nor will measurement require variance reporting. Performance will be measured when implementation milestones have been met, or measured in detail only when processes or targets change. For instance, attainment of registration and insurance certifi-

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cation targets will be assessed once the redesign has been fully implemented.

Because the hospital's accounting system is not directly compatible with ABC, a spreadsheet will be used to reconcile actual improvements with the opportunities identified through ABC.

Conclusion

There is ample opportunity for improving outcomes through functional integration. However, redesigning the delivery of health services

across a continuum can financially hurt some provider partners, at least in the short term. Hospitals may experience lower profit margins and other providers may see double-digit reductions in patient visits.

Nevertheless, by cooperating in the development of a continuum of care, provider partners will begin to drive down overall costs, enhance the quality of care, improve patient satisfaction, and meet the needs of growing managed care markets.

Inova Mount Vernon Hospital has not yet resolved all of the challenges posed by functionally integrating all

provider partners. It has, however, taken an important step toward eventually eliminating the barriers to optimal clinical and financial performance. ■

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