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the Kaiser Permanente IT transformation

The vision of transforming business processes by using technology to connect medical records with revenue cycle operations is becoming a reality.

AT A GLANCE

Kaiser Permanente's major health IT initiative, KP HealthConnect, will integrate all patient information in a single system linking medical information with billing, scheduling, and registration data throughout the organization. Healthcare financial leaders whose organizations want to undertake a similar initiative should:

- Ensure dedicated financial leadership on the team
- Maintain a collaborative relationship with other team members
- Champion the project
- Plan for contingencies
- Develop new processes
- Provide financial oversight for every phase of the project



Imagine connecting medical records for millions of patients to billing, registration, and scheduling areas for a truly connected health information system. Imagine the efficiencies to be gained in patient care. Imagine the savings in operating costs and capital expenditures plus increased revenue due to improved efficiency. Although the magnitude of this vision may be daunting, it's becoming a reality.

Kaiser Permanente, the nation's largest not-for-profit integrated delivery system with more than 8 million members in nine states and the District of Columbia, is uniquely positioned to undertake the major clinical information system transformation now under way to improve healthcare quality, enhance the patient experience, and transform business processes. Kaiser Permanente's health IT initiative is destined to become one of the nation's largest private-sector

clinical IT systems. Known as KP HealthConnect, the large-scale effort will integrate all patient information in a single system linking medical information with billing, scheduling, and registration data. The size of the initiative is such that caregivers will be able to refer patients to specialists on the spot, send prescriptions to pharmacies electronically, and share information in real time with other physicians treating the same patient from different locations. It is a major undertaking. The IDS will invest more than \$3 billion, including one-time investment and ongoing support, over an 11-year investment horizon.

Kaiser Permanente is one of a growing number of health systems implementing large-scale health IT initiatives. However, tight budgets and increasing scrutiny continue to challenge the organization and other adapters of health IT to justify costs and understand the ROI for such initiatives. Through it all,

“benefits realization” is the mantra. To demonstrate and document the value of its technology, Kaiser Permanente has developed strategies, methodologies, and models to improve the deployment and financial management of its technology investments. Health IT implementation projects require a level of project and financial management on a par with a major industrial engineering or construction undertaking. Complex clinical IT projects can be risky propositions that can fail to deliver on their promise. The risks include technical failure, system obsolescence due to insufficient maintenance, and workforce or customer resistance.

As an early adopter of health IT, Kaiser Permanente has learned many lessons from its experience with large-scale clinical IT initiatives. To put the organization’s current health IT initiative properly in perspective, it’s important to look at Kaiser Permanente’s previous experience.

Lessons Learned

In 1991, Kaiser Permanente contracted to develop one of its first clinical information systems, from scratch, in its Colorado region. The organization’s Northwest region embarked on an electronic health record initiative in 1993, and by 1997, the ambulatory module was in use in every medical facility in that region. Both the Colorado and Northwest systems proved to be highly successful initiatives that improved and enhanced business operations and care delivery. Both regions experienced measurable benefits, including a reduction of outpatient office visits within the first two years after implementation. Total office visit rates also decreased about 7 percent (on an age-adjusted basis) in both regions, while key measures of quality improved or remained stable.

In 1999, Kaiser Permanente launched an initiative to roll out a national clinical information system to all of its regions based on an enhanced version of the system in Colorado. The systems marketed at that time by software vendors could not handle Kaiser Permanente’s size and scope; with more than 8 million members and about 12,000 physicians, the transaction volume was

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considerable. The national endeavor involved developing a proprietary system capable of supporting thousands of physicians and clinicians in all eight of the organization’s regions. Kaiser Permanente invested significant resources toward this end. Throughout the system-development period, Kaiser Permanente continued to reassess the initiative’s technology pathway, the cost structure, and new technology developments in the marketplace.

Various factors led the organization to rethink its initial strategy for enterprise clinical IT. Kaiser Permanente’s homegrown system was not able to keep pace with changing technology and innovation in health IT. The system then under development included an electronic health record and supported ambulatory care functions, but it became increasingly clear that inpatient care functionality was also critical. In addition, it became evident that consumer cost-sharing products were going to be part of the new price-sensitive healthcare market reality, and that would require the support of administrative and financial systems to keep track of unit costs at the patient level.

Kaiser Permanente ultimately stopped trying to develop its own outpatient electronic health record system in favor of a commercial product and took a \$442 million computer system development write-off, which significantly affected the organization’s bottom line in 2002. Nevertheless, Kaiser Permanente expects to save \$1 billion as a result of this change in strategy.

ABOUT KAISER PERMANENTE

Founded: 1945
Headquarters: Oakland, Calif.
Components: The not-for-profit Kaiser Foundation Health Plan, Kaiser Foundation Hospitals and their subsidiaries, and the for-profit Permanente Medical Groups
Regions: California, Colorado, Georgia, Hawaii, Mid-Atlantic States Region (Maryland, Virginia, and Washington, D.C.), Northwest Region (Oregon and Washington), and Ohio
Membership: 8.2 million members
Medical centers: 30
Medical office buildings: 431
Employees: 138,000
Physicians: 12,000 (approximate)
Operating revenues for year ended Dec. 31, 2002: \$22.5 billion

KP HealthConnect Business Case

Kaiser Permanente’s senior leadership realized early on that the success of KP HealthConnect depended upon a credible and quantifiable business case. The rationale for the new IT investment was articulated in the underlying assumptions about the costs and benefits for both inpatient and outpatient applications. The goal of the business case was to identify the potential level of return on the overall investment and to provide Kaiser Permanente’s operating regions with information regarding potential operational targets for planning, measuring, and improving performance. Therefore, the business case also serves as a repository of information to guide the strategic decision making associated with the system implementation.

Two business cases were established—one for the inpatient application and one for the outpatient application—and they were driven by data from the literature and the organization’s own experience. Analytical staff conducted extensive primary and secondary research to quantify the potential opportunity. This research spans the spectrum of best practice literature, subject matter experts, focus groups, in-depth quantifiable analysis, and the identification of nonfinancial benefits.

The ROI model used in Kaiser Permanente’s business case analysis captured quantifiable benefits in reduced operating costs, increased revenue, and reduced capital expenditure. The business case also documented benefits in quality of care, patient safety, and member service.

Benefits Realization

Now that KP HealthConnect is being implemented at varying stages in all of Kaiser Permanente’s regions, software license fees and capital costs are being amortized in accordance with generally accepted accounting principles. These costs affect the organization’s profit-and-loss statement and are driving an organizational imperative to maximize benefits and minimize costs associated with the new technology.

As most health systems familiar with clinical IT systems know, achieving these goals is easier said than done. System benefits will materialize as either a reduced expense or a revenue enhancement—but most system benefits are back-loaded while costs are front-loaded. Some benefits are not expected to accrue for months or even years. Realizing the value of KP HealthConnect depends upon a variety of factors, including technology, operational, policy-related, and financial matters. Managing change is key to delivering expected benefits. Also critical to the initiative’s success is the continued strong commitment to KP HealthConnect by the organization’s senior leadership, as well as Kaiser Permanente’s long-standing labor-management partnership.

Kaiser Permanente’s strategic approach to value realization allocates responsibility for technical integration and coordination of activities at the national level, while the organization’s regions are responsible for deployment. Within the national headquarters, a dedicated financial management organization for the initiative has been established with primary responsibility for comptroller duties, communication, and benefits realization strategy development.

Kaiser Permanente’s benefits realization process begins by understanding the overall business plan and engaging the organization’s leadership in setting and agreeing to targets. This step requires a thorough understanding of the business case and the potential impact of the technology.

Next, Kaiser Permanente’s operating regions prepare plans to achieve the industry benchmark targets. This step requires identifying processes throughout the delivery and administrative systems that link to specific benefits and examining the operational impact and complexity of each change. The organization also identifies specific behavior changes required of physicians and staff to achieve the objectives. A change-management plan is developed to integrate the initiative’s various components.

In the “go-live” phase, the project plan is executed, agreed-upon policies are operationalized, and outcomes are realized. Designated milestones and deliverables also are tracked for completion. The focus here is on tasks that provide rapid incremental benefits. KP HealthConnect is rolling out nationally over the next three years with various application suites being deployed in a phased approach in each operating region. The next stage includes monitoring and evaluation by comparing pre- and post-implementation impacts. Results reporting circles back to operations. Operational leaders review what worked and did not work in achieving benefits. Where benefits were not achieved, remedial steps are taken to improve results. Kaiser Permanente is currently creating metrics and collecting baseline data to track benefits and incorporate into regional strategic plans.

Finally, it is important to continue the innovation and to further employ KP HealthConnect as a tool in achieving the regions’ goals. It is also critical to tap into new ideas. Ongoing analysis will be conducted to identify opportunities to add value and maximize the benefits forecast in the initial business case. Suggestions for how further benefits can be achieved will also be solicited.

Key Considerations for Financial Leaders

Healthcare financial leaders may easily underestimate the importance of strategic financial management within the context of clinical IT deployment. Here are eight key considerations distilled from Kaiser Permanente’s experience:

Ensure financial leadership. The foremost critical success factor is dedicated financial leadership on the IT project team to oversee and support all financial aspects of the project, including planning, comptrollership, analysis, budgeting and accounting, and communication. A dedicated CFO for KP HealthConnect provides financial leadership from the national headquarters, and regional business and IT leaders manage and oversee local financial issues associated with the project. Shared financial controller responsibilities are required in the organization’s regions.

WHAT IS KP HEALTHCONNECT?

- The program is a more than \$3 billion systemwide Kaiser Permanente initiative focused on using a common technology to help the organization provide the best care to its patients and real-time medical information to the physicians, nurses, and others who care for patients. (The total cost includes implementation and 10 years of maintenance and upgrades.)
- In addition to an electronic health record, the initiative involves a highly sophisticated, nationwide information management and delivery system that covers every element of the health program and the clinical record along with appointments, registration, and billing.
- Full deployment across all Kaiser Permanente facilities is scheduled for completion in 2006-07.
- KP HealthConnect will help improve the quality of health care provided across the organization. Combining its advanced technology with the organization’s clinically integrated system will eliminate the inefficiencies and error-proneness of paper-based systems.
- The program includes the following application areas:
 - > Electronic health record (inpatient and outpatient)
 - > Patient registration (inpatient and outpatient)
 - > Admission/discharge and transfer
 - > Scheduling of patients with providers and equipment
 - > Evidence-based treatment guidelines
 - > Clinical decision-support tools
 - > Web access for physicians and network providers
 - > Inpatient and outpatient billing
 - > Enrollment and benefits
 - > Inpatient pharmacy
 - > Emergency department
 - > Operating room
 - > Secure messaging
 - > Online medical record access for patients
 - > Online appointments and prescription refills

Engage the project team. Financial leaders should maintain a collaborative relationship with other project team members. In large collaborative projects, clear, consistent, and timely communication will facilitate critical buy-in and garner support from all stakeholders on financial issues that arise.

Foster champions. Business, operational, and clinical leaders need to become champions of the policy and workflow change that must be driven throughout the enterprise. They cannot be out of touch with the size of the challenge and its implications. Their influence comes from their vision, energy, and ability to inspire others. Organizational leadership must be fully committed to using the new health IT, setting targets, and

maximizing benefit realization. For example, Kaiser Permanente found that passionate champions were critical to phasing out paper medical charts and reducing transcription services after the system rollout.

Plan for contingencies. Lack of planning for uncontrollable and unpredictable events can become a major issue for financial managers. Many factors, such as labor supply or dramatic changes in technology, can have a substantial effect on project costs.

Develop new processes. Without workflow redesign to enable more efficient processes, the functionality of health IT cannot be realized. And the new processes and procedures that arise from systems implementation will require new financial control processes as well. For example, the new registration and billing modules in KP HealthConnect will dramatically change cash collection, reconciliation, and other business processes. One example: KP HealthConnect will maximize appropriate revenue capture. The automated medical record system helps to improve the accuracy of Medicare-related coding, which allows for greater capture of revenue. Another factor: KP HealthConnect will reduce costs of paper medical records. Significant copying costs are reduced. Resources and time dedicated to maintaining and transporting paper records are reduced.

Manage scope creep diligently. Unmanaged shifts in the IT initiative objectives can cause a project's parameters to expand beyond its budget and timeline. Although an information system will go through enhancements over the course of its life cycle, the organization needs to clearly define the project's boundaries and then monitor and maintain control over all changes in scope. Formal processes for managing scope creep are essential.

Maintain strong financial management of construction. Health IT can require a colossal capital

investment—that is, investment in PC deployment, network infrastructure upgrade, and bricks and mortar. About 10 percent to 15 percent of the KP HealthConnect investment has been earmarked for improving the existing physical plant to operate a PC environment. That includes wiring medical office buildings, hospitals, and every exam room for desktop computers. This level of construction requires financial oversight for every phase of the project.

Manage consultant costs. Clinical IT deployment requires high-quality labor to get the project done; consultants are one of the biggest project costs and cost-overrun contributors. The positive is that they are short-term contractors. The negative is that they are 200 percent more expensive than employees. So there is a need to plan strategically for the use of consultants on the project team.

A Road Map for Others

Kaiser Permanente's significant investments in KP HealthConnect are part and parcel of the organization's longstanding commitment to enhancing patient care and improving members' total health. The lessons learned along the path to clinical IT integration have informed the manner in which Kaiser Permanente shapes its business process for the 21st century. The benefit realization approach is highly transferable to other organizations, regardless of the delivery system model and for-profit/not-for-profit status. ●

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