EHR Case Study: How a Well-Managed Selection Process Led to a Successful IT Implementation

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About five years ago, Integrated Health Associates' (IHA) antiquated technology was hampering staff efforts to make the most of clinical and administrative data. To correct the situation, the 100-physician, multispecialty practice based in Ann Arbor, MI, embarked on an 18-month search to evaluate and select both an enterprise practice management (EPM) and electronic health record (EHR) system. IHA's goal was not only to support current processes more effectively, but also to develop new approaches for improved efficiency and enhanced delivery of care. With a well-managed selection process, IHA chose systems that met these goals.

HIM-led Selection Process

Championed by HIM leadership, the search for new systems was launched in 2001. IHA's top priorities included making sure the system met HIM requirements while supporting primary stakeholders (e.g., physicians, nurses, coders, and billing staff) and providing seamless integration with other information systems.

The first step in the search was establishing a system advisory committee made up of about 10 members from various departments and units, including select practice managers, physicians, coding and billing staff, and key administrative personnel.

The committee's mission was clearly defined: to identify best-of-breed systems that were easy to use; supported clinical practice; optimized care; facilitated accurate coding, clean claims submission, and optimal billing; improved workflow efficiency and administrative procedures; and integrated with other vital systems.

Rigorous Selection Criteria

The second step was to develop search criteria for what the ideal systems would look like. Although committee members were realistic about the chances of finding perfect matches, they recognized the need to clearly define expectations during the early stages of the process. To this end, the committee created a matrix that included an extensive list of priorities and a points-based evaluation process so that each vendor's system could be assessed objectively.

Besides seeking enhanced practice management functionality, IHA was committed to adopting a system that met the basic requirements of an EHR and could be further customized to meet practice-specific needs. Like traditional paper charts, the system had to serve as the official medical record for the patient, organizing and presenting key clinical information in an easy to access format. And the practice, which submits 500,000 claims a year, also desired an EHR system that would evaluate physician code selections, make coding recommendations based on documentation, and track coding errors so over- and underbilling patterns could be rectified.

In addition to these fundamental functions, the committee's "must-have" list included a range of features.

Open architecture. IHA sought systems that exhibited open architecture, developed from the ground up on a Windows-based platform for maximum flexibility and scalability, which would be easier to use—an important consideration since computer literacy varied widely among the 700-member staff. In addition, the open architecture would allow IHA to develop its own forms and templates to ensure that the systems would continue to grow and be responsive to future practice needs.

Open database connectivity. All stakeholders agreed that the systems must exhibit open database connectivity to capture important administrative and clinical data, which would allow staff to easily gain access to information in a variety of formats for optimal reporting and analysis. The long-term benefits would include workflow process improvements, identification of

suboptimal coding and documentation patterns on a provider-by-provider basis, and implementation of advanced disease management and health maintenance programs.

Diagnostic equipment interfaces. Equally vital was the EHR's ability to interface with diagnostic equipment and laboratory services, so that results from studies, tests, and screenings could be automatically imported into the patient's medical record. In addition, IHA sought a system capable of supporting a Web portal so patients could submit in-home diagnostic information (e.g., readings from a glucometer). IHA also determined that the EHR system should feature automatic e-mail alerts to immediately notify physicians and other clinical staff when results were available.

Seamless integration between EPM and EHR. With vital information flowing freely between the systems, IHA could maximize benefits in the clinical setting and ensure that all coding, compliance, billing, and accounting functions would be optimized as well. Data generated from the EHR system, for instance, could be factored into the financial analysis of specific managed care contracts and used to negotiate favorable rates and terms.

Internal IS management. IHA also wanted to ensure that the combined EPM and EHR systems could be easily managed and maintained in-house. When the search for the new systems began, highly qualified IS staff were hard to come by and demanded a premium wage. Because of these market conditions, IHA wanted to avoid the expense of adding staff and the need to contract with outside vendors to maintain the systems.

Security. In response to concerns about the previous system, the committee assigned high priority to security and access-tracking functionality. With recent HIPAA developments and increased consumer sensitivity to privacy, IHA closely scrutinized confidentiality requirements and regulations throughout the selection process. It sought systems that allowed internal audits to identify who had accessed patient data and how information was handled.

Clinical outcomes measures. Finally, IHA wanted to make sure the EPM and EHR systems did more than simply solve the problems associated with the older technology. Specifically, it required that the new applications provide additional support for clinical initiatives, allowing physicians to analyze quality standards and clinical outcomes (e.g., HEDIS measures). This functionality would ensure IHA was prepared for the pending transition to a pay-for-performance reimbursement environment. Additionally, it would provide physicians with a tool to analyze which disease management programs provided patients with the greatest motivation to comply with care plans and to ensure patients followed standard screening and prevention recommendations.

With the selection criteria clearly defined, the system advisory committee then conducted an internal work process audit, analyzing both the flow of paper and the flow of people through the practice. With this data in hand, leadership could select the systems that would best support the staff and offer the greatest opportunities to streamline operations, enhance efficiency, and optimize the delivery of superior care.

Vendor Evaluation

Once these pieces were in place, IHA began the process of soliciting proposals from vendors. The first step was to carefully evaluate each company's product descriptions and specifications. Many of the identified priorities were non-negotiable, like the required open architecture, and so committee members immediately rejected applications that clearly could not meet the prerequisite technical criteria.

After the first round of evaluations, IHA invited remaining vendors to send product and technical specialists to meet with the committee. During these discussions, direct questions were raised, designed to uncover any discrepancies between the vendors' promotional materials or proposals and the true functionality of their products. For instance, a number of vendors submitted product descriptions claiming their systems were Windows-based. Closer scrutiny, however, revealed that was not always the case.

This two-tiered approach quickly narrowed the field to three systems that met the vital criteria outlined in the matrix. Multiple on-site demonstrations of each of the top three systems were conducted, so that all interested staff members could take a look at the candidates and provide input. Because IHA recognized that the users would ultimately determine the success or failure of the new systems, it wanted to make sure that all individuals had the chance to try out the technology, evaluate the features that would affect their job most directly, and provide input about concerns.

While staff members were assessing the systems, the committee turned its attention to the corporations that offered each of the products. Besides wanting to make sure the EPM and EHR systems themselves were reliable, IHA wanted assurance that the company providing the products was solid, too. Each vendor was evaluated on its corporate history and reputation, financial stability, and commitment to ongoing product development.

At the end of this process, the field was narrowed to two prospects, and the committee ranked each according to the initial selection matrix. Ultimately, one system was eliminated because it became clear that portions of its functionality were developed outside of the base system. The committee was confident that the remaining vendor's systems were the most flexible and would meet virtually all the criteria.

Once the selection was made, implementation began immediately. IHA examined the hardware it had in place and developed a plan to ensure each administrative and clinical setting was properly equipped. For instance, committee members needed to investigate whether to install personal computers in each exam room, to issue laptops that could be carried by the physician or moved from room to room on a cart, or to purchase tablet computers for providers. In addition, the committee began working closely with managers at each of IHA's 24 locations to develop a strategy so the new systems could be brought online to optimize adoption and successful utilization.

Lessons Learned

Implementation has not been without its challenges, and the process underscored a handful of issues that IHA overlooked during its search:

- It is important to consider the various levels of computer literacy early in the process. Some clinical staff members, for instance, had never used a computer, and even the most user-friendly system presented challenges.
- While the search committee did an exemplary job of defining overall workflow processes at IHA, it did not take into consideration personal habits of individual physicians and clinical staff. For example, some physicians kept paper "tickler files" on diabetic patients to make sure they came in for regular visits and resisted transferring these reminders to electronic files.
- It pays to be sensitive to the dangers of overselling the benefits of a new EHR system, as well. For instance, IHA implemented the use of proximity cards for faster physician log-in. While this technology saves considerable time, it is not instantaneous, which is what physicians had expected.

Minor problems aside, the selection and implementation of the EPM and EHR systems at IHA has progressed smoothly thanks in large part to the meticulous selection process. Many of the anticipated benefits are already being realized. In fact, IHA believes it has come very close to adopting systems that nearly match the ideal profile identified early in the process. IHA continues to look ahead and is working closely with the vendor, developing plans to ensure that the technology will grow and evolve with the practice.

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