SELECTING A PHARMACY INFORMATION SYSTEM

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Abstract
This paper presents a method of evaluating pharmacy information systems. Once the desired application features of a system have been determined, the vendor selection process involves establishing priorities, deciding what information is needed, obtaining that information and then analyzing it. The paper also outlines a method to quantify vendor responses and known vendor performance.

Introduction
The pharmacy is an information-based area. In the last twenty years, the information base upon which the pharmacy depends has grown exceedingly large and complex. This explosion of information, coupled with increased departmental operational costs and scarce institutional resources, is changing the optional nature of computerization of pharmacy services into almost a necessity.

All hospital pharmacies, regardless of size, have common functions that can easily be computerized. These include billing, label production, statistics and reporting, and inventory control. Given the risks and costs of developing a pharmacy information system, and given the number of systems already available for purchase, it makes sense to evaluate existing pharmacy software packages for a possible fit in a given pharmacy.

A formal system selection process is one of the most important first steps in successfully computerizing the pharmacy department. Once needs have been documented, the standard selection procedure consists of: 1) Developing the RFP (Request for Proposal); 2) Establishing priorities; 3) Reviewing vendor proposals; 4) Attending vendor presentations; 5) Reviewing references; 6) Visiting vendor clients; 7) Reviewing vendor stability; 8) Making the decision.

Developing the RFP
In the initial stages of computerization, the development of a Request for Proposal (RFP) serves three major purposes: planning, communication, and vendor selection. The process of developing an RFP goes beyond documenting functional and technical needs. It provides an excellent opportunity to pinpoint any weaknesses in the current operation and make definite plans for streamlining and improving departmental procedures.

A thoughtfully designed RFP is essential to elicit information from vendors. It should be designed to ask vendors which specific features are currently available, what are the planned enhancements, and whether desired features are available for an additional charge. The RFP should contain at a minimum a profile of the hospital, the applications features desired, technical requirements, implementation and training requirements, and instructions to the vendors on how to respond to the RFP.

Establishing Priorities: The Crucial Step
The first step in establishing priorities is understanding the factors which will be important in the selection decision. This is accomplished by creating a Priority List. The Priority List outlines the general topics to be investigated in order to make a sound decision, and contains items like: 1) Quality of Software; 2) Reliability of Software and Hardware; 3) Vendor Stability; 4) Cost; 5) Vendor Support.

While the quality and suitability of the application software will be a major factor in the decision, other items, like vendor stability and commitment to the pharmacy product are also extremely important. In most cases, information about these items will not be available from the RFP responses; indeed, some answers cannot and should not be fully obtained from the vendors at all. The true quality of vendor support, for example, can only be ascertained from discussions with users of the vendor's products.

The next step in the selection procedure is to rank each specific feature requested in the RFP according to its importance. One good method is to rank each item as follows:

1. Mandatory items: These are absolutely required, and no contract will be signed unless the vendor commits to providing them.
2. Items of high importance: These requirements are of significant importance to the institution.
3. Items of importance: These requirements would be advantageous to the system.
4. Other items: These items are "luxuries."

Categorizing the RFP performs many functions. First, it aids in making the final selection by imposing objective criteria on the decision-making process. Second, it helps guide discussions with vendors by forcing discussion on high-priority items. Finally, it is a helpful means of communicating priorities to all parties involved in the selection process.

Reviewing Vendor Proposals

The primary purpose of reviewing vendor proposals is to reduce the number of vendors under serious consideration. Some of the most important items on the Priority List will not be discussed at all, and it will not be possible to get a complete understanding from the RFP response of how a system works. It should be possible, however, to see whether a system includes the major modules desired, and whether it meets some of the other selection criteria. The review of RFP responses should be viewed as a general survey of available systems, designed to weed out obviously inappropriate vendors and to furnish background information on the likely vendors. In-depth investigation of priority items occurs in subsequent evaluation steps. Remember that the proposal is a sales document and that it emphasizes a system's strong points, and minimizes its weaknesses. Skepticism is a valuable tool in reviewing vendors' statements.

Even though all of the items on the Priority List will not be addressed in the vendor proposal, the vendors will include price quotations, hardware configurations, and standard contracts with their proposals. From these documents preliminary information about costs, maintenance schedules, training, and hardware expansion capabilities can be distilled.

Attending Vendor Presentations

The vendors that appear to best meet basic requirements should be invited to explain their systems in person. The audience for the vendors' presentations should represent many hospital departments, like Pharmacy, Nursing, Finance, Medical Records and Admissions. Since the presentation will be more detailed than the proposal, pharmacy supervisory personnel who deal with daily operations should be included. If the institution has a data processing department, a representative should attend to ask questions in technical areas.

The RFP and the Priority List should be the discussion guides for the presentations. The vendor should explain in detail the major inputs and outputs of his system. The quality and suitability of a pharmacy information system can often be determined by the vendor's understanding of how the user will interact with the system.

It is essential to ask for a list of references of users of the system. The most relevant references are from institutions who are similar in size and functions. During the vendor presentations, the Priority List should be used to gain information about the company itself. A financial statement and annual report should also be requested. These latter documents should be evaluated by a financial expert to determine the company's financial stability.

If non-pharmacy personnel attend the presentation, hold private discussions later to give them a chance to present their views. From these presentations, it will be possible to identify vendors that do not meet the institution's needs.

Reviewing References

Interviewing the users on the list of references will make it possible to find out how well the system works in practice, and how accurately the vendor has represented his product. The initial interviews can be conducted by telephone. A form should be developed to ensure that all references are asked the same set of questions and that telephone interviewers can share uniform information with all of the system decision makers.

Users are generally open and honest in these conversations, if they are approached in a friendly, non-accusing manner, and a great deal of useful information can be gained. Since vendors usually provide only successful installations as references, an effort should be made to determine whether the lack of success is the fault of the vendor or of factors within the hospital.

Visiting Vendor Clients

It is essential to see an actual system in use, preferably in a pharmacy of similar size and function. The sales representative should not be included in a site visit; the user will be much more honest about his system if the vendor representative is not present. The goal of a demonstration is to find out whether the people actually using the system (clerks, technicians, pharmacists) like it and find it easy to use. A site visit provides the opportunity to look at actual reports, terminal screens, and labels. It also provides the opportunity to gauge the system's response time under actual operating conditions. When considering a system that has not yet been implemented anywhere, have the vendor demonstrate the system at his office. With either method, remember that the software may not exist if it cannot be seen.

Reviewing Vendor Stability

Since a computer system should last from five to ten years, purchasing a system means entering a long-term relationship with the vendor. It is important to be confident that the vendor not only will remain in business, but also will continue to support and improve his product. Of course, the element of risk is never removed from this judgment. A large corporation may discontinue one of its product lines. A small company selling only pharmacy systems may not be able to find enough customers to remain in business.

In determining a vendor's stability, the financial data furnished by the vendor as well as discussions
with the sales representative or executives of the company are sources of information. Much of the data necessary to assess the vendor's stability and commitment to his pharmacy product can be obtained by asking direct questions of the vendor representative and of company officers. Assessing the past performance of the vendor is one indicator of future service and commitment. When a pharmacy system is purchased, a major commitment of the hospital's resources are made to the vendor's product. It is reasonable to expect the vendor to make the same strong commitment to that pharmacy product.

Making the Decision

In making the final vendor selection, the information from the categorized RFP's with the vendor responses and the Priority List will be used. Even though there are established objective criteria and collected information, some value judgements will still have to be made.

One method for evaluating vendors is based on a point allocation system. Each of the items on the Priority List (Quality of Software, Reliability of Hardware and Software, Vendor Stability, Cost and Vendor Support) is assigned an equal weight of 20 points each. Then for each vendor, take the prioritized applications features from the RFP and assign 10 points for all the mandating items, 3 points for important items, and 1 point for other items. Total the score for each vendor. The vendor with the highest score should then be assigned 20 points, and all other vendors should be assigned points proportionally. For example, if Vendor A's score is the highest at a total of 70, then assign him a point value of 20. If Vendor B has a total score of 35, then he should receive half of Vendor A's point assignment, or 10 points. When judging Reliability of Hardware and Software, after checking references, give 2 points for each reference that has been installed for more than two years and who can report satisfactory vendor maintenance of software and reliable hardware. Do not assign more than a total score of 20.

For the Vendor Stability score assignment, give 5 points for each of the following categories where the vendor is satisfactory:

1. Stability of company
2. Commitment of the company to the pharmacy field
3. Commitment to this pharmacy product
4. Knowledgeable vendor personnel

For the Cost score assignment, assess total two year costs for hardware, software, training, staff and consulting. Assign a score of 20 to any system that is $100,000 or less. For every $10,000 above $100,000, decrement the score by 1. Thus a $150,000 system would be assigned a score of 20 minus 5, or 15.

Once a vendor is scored in each of the five Priority List categories, the total score for that vendor should be compared against the total score for the other vendors under consideration. Thus, an objective selection of a system can be made.

Most vendor selection procedures result in successful systems. Furthermore, the process itself is beneficial, since it provides the opportunity for thoroughly studying operations and setting priorities for the pharmacy department.

References