



## Best of Breed vs. Integrated Systems

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### INTRODUCTION

Hospitals looking for solutions to problems associated with its Emergency Department patient tracking and documentation processes now have a myriad of choices. Those choices can be crystallized into two strategic approaches: “Best of Breed” or “Integrated Systems”. Several companies offer a specific emergency department information system as a solution. A majority of these “Best of Breed” companies may have bits and pieces of an emergency department information system. However, most hospital emergency department nurses and physicians are demanding full-functioning systems designed specifically for the emergency department. The other avenue hospitals can explore is the large hospital information system companies who probably do not have but promise a full-functioning EDIS module. This White Paper examines why a full-functioning “Best of Breed” system is most likely to deliver on the promise of an EDIS solution compared to the “Integrated Systems” approach. In addition this paper provides questions for hospital administrators to ask when looking for an EDIS.

### INTEGRATED SYSTEMS

In an ideal world, all hospital information systems would be 100% reliable and would meet each hospital department’s specific needs. Data would be easily shared from one department to another. There would be no downtime, and support needed for these systems would be minimal. However, hospitals are made up of many departments with very specific requirements. An information system that works well in radiology will probably not be applicable in surgery. A medical-surgical floor has information needs that will probably not be met with an information system designed for the lab.

The Emergency Department has become more and more important to the well being of the entire hospital. The success of EDIS installations shows that the financial impact of the ED can be dramatically changed and the quality of patient care improved. Hospital EDs are experiencing dramatic growth in daily, monthly and annual visits and have become responsible for anywhere between 30%-70% of total hospital admissions. This dramatic impact results in information system requirements in the Emergency Department that will not be satisfied by a hospital-wide system typically designed to satisfy financial rather than clinical needs.

Hospital information technology executives tend to express concerns about “Best of Breed” systems because of what they assume are the resources need to support systems other than their Hospital Information System (HIS). However, hospital HIS vendor systems such as accounting and billing, lab, radiology, medical records and others must interface with each other anyway and utilize more support resources. The important question for IT executives is how well any vendor, whether the HIS so-called “integrated system” or a “Best of Breed” vendor has demonstrated the ability to write and implement interfaces with the different departmental systems and the hospital’s enterprise system.

Hospital administrators are quickly discovering that there is no one so-called “Integrated System” that has successfully developed and installed a full-functioning EDIS that meets the specific and detail information system demands that will improve the operations of the Emergency Department. The only option would be to select a “Best of Breed” system. A “Best of Breed” system is typically developed taking into consideration the rigorous requirements of an Emergency Department. “Best of Breed” companies spend research and development resources on meeting the specific information and process needs of an Emergency Department. The keys to a successful implementation of a “Best of Breed” EDIS focus on how well the “Best of Breed” vendors write and implement interfaces to other departmental systems, the reliability of the EDIS and the ability to meet the clinical, documentation and process needs of the Emergency Department.



In addition to these issues, an article written by Beckie Kelly Schuerenberg and entitled "Shopping Around, Buying Best-of-Breed" in the September 2002 issue of Health Data Management magazine points out the following important points:

- Multi-system vendors can take months, even years, to develop and refine applications with functions similar to those that specialty vendors already have created and honed.
- Whether applications are clinical, financial or e-health, many health care organizations have concluded that no single vendor can offer the best application for each breed of technology. Many health care organizations are using the best-of-breed strategy for clusters of I.T. based on how well the new software can integrate with a database.
- For organizations using multiple vendors for ancillary or other applications, implementing individual specialty systems one at a time often will be less expensive than installing multiple information systems simultaneously, as when using the single-source strategy. The best-of-breed approach can enable health care organizations to take on smaller projects, achieve success, and then move on.
- Specialty or best-of-breed vendors do one thing, and do it well. They know their software and can make changes quickly.
- Rather than focusing on the top functionality, organizations using best-of-breed strategies now are focusing on the top business requirements. They are matching functionality of an application with particular business needs.

### **FULL FUNCTIONING "BEST OF BREED" EDIS**

Hospitals looking to improve clinical, documentation and process needs of its Emergency Departments should look for vendors that provide full functioning systems including features such as patient tracking, nurse and physician documentation and risk management and interfaces to other departments and the hospital HIS. A hospital Emergency Department should capture the following benefits with a full-functioning EDIS:

- Increase Emergency Department Revenue through improved efficiencies and charge capture. (Physician Revenue, Efficiency and Charting Time)
- Reduce patient paperwork by creating an electronic medical record.
- Reduce litigation exposure through on-line, real time risk management prompts during physician and nurse documentation of the patient encounter.
- Eliminate hospital dictation costs with voice recognition technology.
- Reduce redundant data entry with interfaces such as ADT, and order entry, status and results reporting systems to lab, radiology and other departments.
- Promote user compliance with an easy-to-use web-style design for managing patient data from triage through disposition.
- Assist with various components of HIPAA, EMTALA, JCAHO and HCFA compliance through the ability to drive reports (instantly/limitless scope from ED data) for contracting, inspections and



internal management.

- Make standard and ad hoc reports consistently available through the compiled data registry. (nursing, administration, quality assurance and contracting)
- Positively impact patient satisfaction by increasing emergency department work flow and throughput with patient experiencing less waiting and redundancy resulting in a better ED experience.
- Increased productivity of Emergency Department nursing personnel by limiting and/or reducing time to record, retrieve and distribute patient data.
- Increased productivity of coding staff by providing chart information that is accurately and clearly associated with specific CPT, ICD9 and APC codes.

## WHAT TO ASK POTENTIAL EDIS VENDORS

In addition hospitals looking for an EDIS should request from potential vendors certain information and ask potential vendors questions such as the following:

- Give a list of server hardware requirements for a fully implemented system, including any hardware necessary for interfaces. Include a cost and hardware analysis for implementation throughout the entire Integrated Delivery Network. Include amount of RAM, server processor speed and number of processors, network hardware, and any additional hardware necessary for interface functionality. Hardware requirements can be a significant “hidden” cost to purchasing an EDIS.
- What network operating system does your system require for functionality? Does it require a Windows NT network? Novell? Other? Is it compatible with all of these?
- Is your system available as a Web-based system? If so, is all of the functionality of your system available from any Web browser? Does functionality over the Web depend on Web based distribution of a complex client? If not currently available, is a Web-based release planned? On what date will it become available?
- What is your current mean time between failures? Has downtime traditionally been the fault of the server? The client? Interface software?
- Does routine maintenance of the interface software (restarting, viewing the logs) require local access (i.e. someone on site), or can this be done remotely through the software itself?
- Are public and private key encryption digital signatures standard within your product? Is each access to patient data logged, including user and time stamp? Can this be viewed easily?
- Does your product support voice recognition technology? Is your software compatible with a range of voice recognition technologies, or are you restricted to one product?
- Does your company have existing functioning interfaces to all of the major hospital systems (SMS, HBOC, Meditech, Cerner/TDS, etc.) Does your company have existing order entry interfaces?
- When can interfaces be built? If the system requires that they be completed before installation, how



will this affect the timing of implementation?

- Does your product support multiple sites without modification, on a single server, without complex terminal server software?
- Does your product feature integrated risk management features, including prompts for specific items of history and physical exam, and immediate feedback on their importance?
- Does your software support and do your present client sites utilize Biometric Authentication Devices, Passive Tracking and Proximity Security Cards with your system?
- At how many sites since the origination of your company has it been necessary to de-install your software due to the client's request?

### **DUE DILIGENCE RESULTS IN AN INFORMED EDIS DECISION**

By asking the right questions of the EDIS vendor, and seeing a full functioning EDIS during an on-site visit to a hospital emergency department, hospitals attempting to make a call regarding "Best of Breed" versus "integrated systems" will make that decision based on solid information. The stakes are much too high to do anything less. The "Best of Breed" emergency department information system at this time provides the emergency department and the hospital with a system that will result in improved processes in the ED with the ultimate result being improved patient care.