

White Paper

Experience-based Marketing of Forms Management within Healthcare:

Proper forms management does play a role in affecting
patient safety and satisfaction

“Any unplanned downtime or other service interruption will become unacceptable or potentially dangerous...”

Scott Joslyn, CIO
Hospitals and Health Networks, 2003 Most Wired Survey and Benchmarking Study

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Dramatic economic and regulatory changes are forcing every organization within the healthcare enterprise to re-evaluate and re-think the use, storage, and retrieval of one of its most needed assets, the paper form.

The objective of this white paper is to examine three catalysts prompting the need for effective management of these forms, and to highlight the associated beneficial impact.

Introduction

Most people have experienced the process of having to fill out various numbers of paper documents that are required prior to receiving health care. Clinicians, managers, and business office staff alike utilize numerous forms for each patient hospital stay. With the enactment of the HIPAA legislation regarding the confidentiality of patient information in April 2003, even more of these forms were brought into existence.

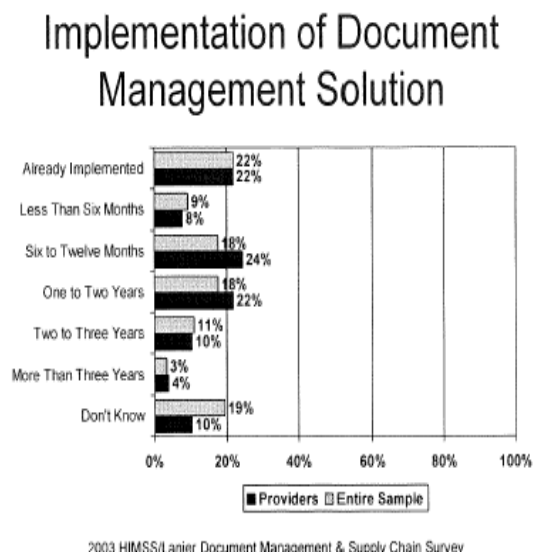
Given the voluminous amount of forms necessary for recording patient information, there needs to be adequate management of all of these forms across the enterprise. Unfortunately, these documents, the physical design of them, the content within them, the processes of creation, revision, and obsolescence, and the overall production of them are rarely properly managed.

These issues raise these questions:

- Where is the management of these forms as they relate to version control and the creation/obsolescence process? Would proper management of forms help to enhance *patient safety*?
- Where is the management of these forms as they relate to any *migration strategy* from paper to digital means? Would migration from paper to digital record keeping assist facilities to meet and possibly exceed Joint Commissions for Accreditation of Hospital Organizations (JCAHO) standards?
- Where is the management of these forms as they relate to *cost saving* initiatives? Would proper forms management help facilities in cost cutting initiatives?

The answer to these questions about proper forms management is—yes, and this white paper will provide details to assist in making the change to an effective forms management program. As Figure One below shows, the % of respondents who completed the survey, where they (the hospitals they represented) were in staging their implementation of a document management solution (survey conducted at the HIMSS conference in 2003).

Figure One



Though less than 25% of the respondents had already implemented a document management system, the data in the chart shows approximately 70% of the respondents are planning a Document Management implementation over the next 1–3 years. (It’s important to understand that often in Healthcare, the terms, forms, and documents are used interchangeably. For the rest of this paper, I will use the terminology of forms management.)

From the many years of selling and implementing forms management programs into healthcare, I have discovered three reasons (catalysts) why most healthcare providers look to institute forms management within their facilities. These reasons are **Patient Safety**, **Migration to a Digital Infrastructure**, and overall **Cost Savings** within the organization.

What is the Impact of Forms Management on Patient Safety?

Patient Safety is a major issue for healthcare providers for many reasons. First, is the overall care of the patient. Having the right version of the right form with the right verbiage on it helps clinical staff provide proper and effective patient care.

As an example, a hospital in Montana experienced the following:

A patient named Jane Doe entered the hospital to have a surgical procedure performed. The physician wanted to monitor post-operative pain. Monitoring this pain would involve visits by the nurse, who would record the patient’s self-reported levels of pain onto the medical form. The form was then placed in the patient chart for doctor review.

On the first day the pain was recorded on the form as a “2” (using a scale of 1–5, with 5 being the highest level of pain). On Day Two, the doctor received the form and noticed that the pain indicator was a “4”. The doctor was very disturbed by this upward trend in pain and sought clarification from the assigned case nurse. The doctor was further disturbed to learn that the pain indicators of “2” and “4” were actually representing the same level of pain. However, the data was recorded on two different versions of the same form—one with 5 being the highest level of pain, and the second with 1 being the highest level of pain.

What might have happened if the “Pain Indicator” was not challenged on Day Two, and the patient was over medicated as a result?

In another instance, the facility had already implemented a forms management program. A nurse brought a form to the print center to have them run off 500 copies. After the forms Document Advisor (DA) told the nurse that she could order the forms on-line and save a trip to the print shop, the DA prepared to run the job.

The Document Advisor logged into the on-line forms ordering system to place the order. Upon retrieving the form that was in the on-line system, the DA realized that the form in the forms management system was different from the one that the nurse brought down for production. The DA then

called the nurse to review the form in question. The nurse was surprised to learn that she had asked for an old form to be produced and not the most recent approved one. Upon closer examination the nurse noticed that the old form had misinformation, which could have resulted in improper patient care if this older form had been used.

What might have happened if the patient received the treatment as indicated on the old version form?

These are but two examples of how having improper forms took time, and energy away from patient care, and could have caused adverse effects on the patient.

Patient Safety is a major concern, and the processes surrounding these forms and their versioning control are relevant in providing quality patient care. **Proper forms management has a positive effect on the quality of patient care.**

Effective patient care is a barometer used within healthcare facilities. Having patients who express an overall good experience for a hospital stay, means acceptance within the community for the healthcare facility. This is extremely important for the continued existence of the facility, given today's struggle for hospitals to maintain marketability while managing their cash flow.

Forms processes of Creation, Revision, and Obsolescence are key processes in safe and effective operations of a healthcare facility. For these reasons JCAHO is always interested in understanding these hospitals processes.

The ability to have the proper tools of the trade at the moment of need is critical. As a surgeon requires the proper scalpel to ensure the best surgical results, so too, nurses, doctors, and clerks need the appropriate tools (correct version of forms) in order to communicate effectively.

Proper forms management does play a role in affecting Patient Safety issues and improved patient satisfaction. Through the effective marketing of this, continued satisfaction and the hospitals image within the community will be strengthened.

What is the impact on forms management when considering migration efforts from paper to digital medium?

The need for proper forms management within healthcare as it relates to the migration from paper to digital is necessary to maintain the smooth operations within what is typically a very pressure filled environment. In healthcare environments today, electronic patient records (EPR), or electronic medical records (EMR) are frequently being discussed. Many hospitals are embarking on the transformation into what has been termed the Holy Grail in the recording and storage of patient health information (PHI). Many hospitals are teaming with their Health Information System (HIS) provider in order to accomplish the needed transformation towards the EPR/EMR.

An Institute of Medicine panel on July 31 issued guidance to the Department of Health and Human Services (HHS) regarding the key care-delivery functions an electronic health record system should possess. HHS requested the guidance in May, in part to assist the Health Level 7 standards-setting organization in developing a national electronic health record model. Scott Wallace, CEO of the National Alliance for Health Information Technology, commented, "Based on the work of an impressive panel of healthcare experts, this report helps the field define the essential elements of the electronic health record, a critical building block of a patient-centric healthcare information infrastructure. Together with the comments gathered through the six regional meetings of the EHR Collaborative, we believe it shows great progress in bringing the entire healthcare field together to craft thoughtful, practical standards for healthcare IT."

Source: AHAnews.com, IOM panel provides guidance on key electronic health record functions, July 31, 2003

Transforming the paper giant of Goliath into the paperless EPR/EMR is not an easy task and requires an understanding of the current forms environment which includes a recording of all forms, analysis of their current state, and a thorough understanding of the processes for ordering, creation, revision, and obsolescence.

Clinical forms are ever changing within healthcare environments. Understanding the management of the existing paper-based forms is necessary in order to help build a system that results in a manageable EPR/EMR. For example, by understanding the process surrounding the creation and revision of a form, the proper processes can be established for the ongoing maintenance of the EPR/EMR system. Understanding the process of Obsolescence helps to size the hardware necessary to maintain the EPR/EMR system for both retrieval and long-term storage needs. Without a clear understanding of these processes and how they integrate with the practice of medicine, the overall system of EPR/EMR will not be fully realized.

Many hospitals today are making the change to digital forms. They are migrating them into computerized forms (eForms) and utilizing their Health Information System (HIS) as the repository. However, in deploying this type of model, careful consideration must be given to emergency planning as this model, by itself, represents a single point of failure should the computer system go down.

Therefore, another concern that must be addressed is emergency planning. Emergency planning is not just disaster planning for system backups, or allocation of “Hot Spares”, etc. True disaster planning must incorporate the use of paper form as backup. Computer systems go down, networks go down, brown outs and black outs do occur. When these events occur for any extended period of time, paper backup is necessary. Maintaining the means to produce forms in hardcopy and maintaining the integrity of the versioning of the form must be included as part of the whole emergency planning process.

A hospital in the Midwest instituted an EPR/EMR system. Extensive time, energy, and capital were allocated to make this system operational. Then it happened—a fire in the sewer between the buildings of the hospital campus. The fire destroyed many of the communications cables that connected the hospital buildings to the IT system. Very few areas were able to connect to the computer system. The outage lasted a week until the repairs were sufficient for most staff to regain access to the system.

In this case, emergency planning had been thought through, but not extensively enough. Patient information forms were required for clinical and business office documentation. This information was previously recorded on the forms within the EPR system, only now there was no access to the system. There was an onsite print shop, and many of the forms were still there, so the facility was able to eventually recover. However, this hospital learned a valuable lesson in maintaining proper paper backup for their forms. These backup forms would have still allowed the hospital to perform all the necessary patient care processes when an emergency outage of the computerized system occurs.

Supporting IT with infrastructure investments is a major priority for many Most Wired organizations. Memorial Health Services, Long Beach, Calif., is upgrading its infrastructure. The goal, according to Scott Joslyn, senior vice president and CIO, is “to provide a level of capacity, reliability and redundancy that will be required for new clinical systems that are woven into the fabric of care delivery processes.”

Joslyn defines the issue this way: “Any unplanned downtime or other service interruption will become unacceptable and potentially dangerous as our dependence increases dramatically on various interconnected technologies, from the point of care back to remote data centers.”

Source: Hospitals & Health Networks' 2003 Most Wired Survey and Benchmarking Study

The following shows the results of a study conducted by *Hospital and Health Networks* regarding the projects that the 100 Most Wired hospitals are undertaking. The result of these projects will be to streamline the workflow, enhance patient safety, and perhaps, reduce future costs. The interesting thing is that in order to accomplish these tasks the patient records (and data) need to be in digital format. Therefore, migration from paper to digital is a recognized priority within healthcare.

Top Priorities Among the 100 Most Wired

The Most Wired continue their drive to use information technology strategically. Systems that promote safety and quality—as well as medical records upgrades and rollouts—are high on the list of priority projects for the Most Wired. Data are from a follow-up survey of the 100 Most Wired, 72 hospitals reporting.

Clinical systems	42
CPOE	36
Infrastructure	24
PACs	25
Medication management	18
CPR/EMR	18
Wireless projects	17
Revenue cycle/business office	15

Source: *Hospitals & Health Networks'* 2003 Most Wired Survey and Benchmarking Study

Proper forms management can ensure the accuracy of forms use and will shorten the overall migration timeframe while enhancing the quality of the end product. An old computer adage of Garbage In—Garbage Out (GIGO) is wise advice.

What is the impact of forms management on cost-saving initiatives?

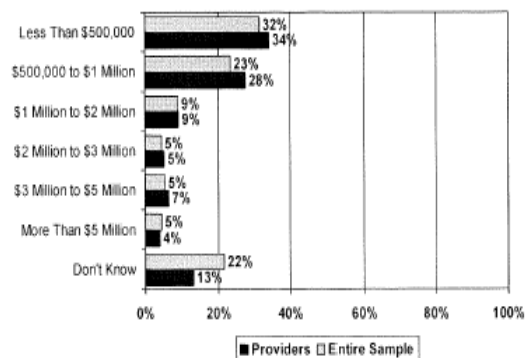
Perhaps the most requested reason for forms management initiatives is the fact that proper forms management can save the hospital money. Hospitals understand this, and realize that the financial savings can offset, or entirely pay for the cost of the conversion to a managing forms program.

Typical hospitals spend \$500,000 to well over a million dollars annually for forms production work. One very large hospital that I was involved with annually spent over \$10 million dollars on its forms production needs. According to the 2002 Printing Industries of America, Inc., the cost of print provider products and services for business forms had risen 58.9% from 1992 to 2001. The potential for cost savings provides another reason to have a forms management strategy in place.

Figure Two shows the results of a survey conducted at the HIMSS conference in 2003. The results present what hospitals spend annually in document management.

Figure Two

Annual Document Management Budget



2003 HIMSS/Lanier Document Management & Supply Chain Survey

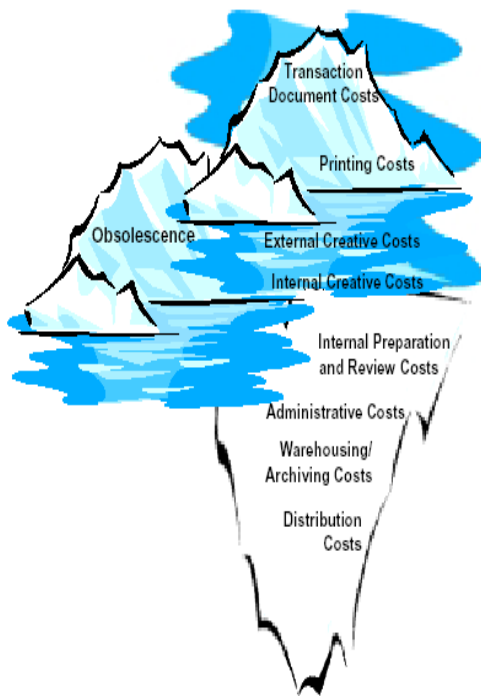
Cost savings have been documented in the range of \$100K + annually for a 400-bed hospital and much more savings may be realized for larger hospitals. This is an annualized savings, and with the continued management of the forms, the resultant savings can be substantial over time.

Successful realization of cost savings requires a thoughtful and deliberate approach. This defined methodology of procedural steps allows the enterprise to perform:

- an inventory of all their forms
- an analysis of those forms that can and can't be produced by Print on Demand (POD)
- utilizing in-house production of forms that can be produced more inexpensively by POD.

However, print costs are just a piece of the overall forms production cost structure as the 'Tip of the Iceberg' diagram that follows, illustrates. The whole analysis process should look at many of these cost elements, and offer a Return on Investment (ROI) that not only will result in costs savings to the hospital, but also capital for the cost of implementing the recommended forms management program.

**Enterprise Wide Document Management Costs—
Printing is just the 'Tip of the Iceberg'**



The whole process of performing the initial assessment, conducting the analysis, and work shopping the solutions and the resultant business case, including ROI, is a valuable undertaking for the enterprise. Since it charts the course for migration to electronic forms, this analysis represents an often-necessary first step.

The end result is one of great value, as the facility now has a baseline of current day forms, volume, production information, process adherence information, and costing data to use in future decision-making processes.

Whatever the strategy or process involved in, reducing supply costs, the key word is "change." Institutions and managers have to be willing to do things differently with newer, more equitable relationships at their foundation to bring about the changes needed to drive down costs and bring about maximum efficiency. When Diebner asks, "Are you willing to break the paradigms of what you've done before?" he's not really asking. Instead, he's telling: you have to be willing to break the paradigms of what you've done before. Period.

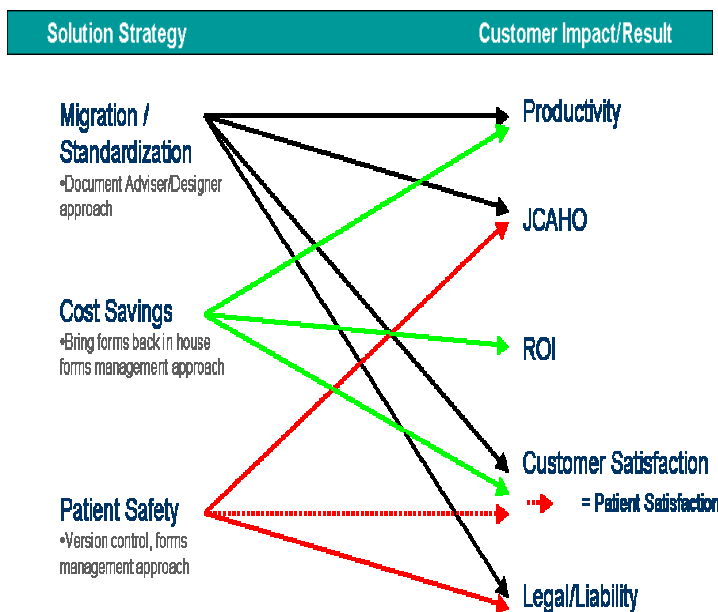
Source: HospitalConnect.com

Material Strategies
The Time Is Now For Executives To Rethink Their Overall Approaches To Materials Management
July 1, 2002

Conclusion

The ultimate goal of an organization is to be able to leverage its forms management system for strategies of migration, cost savings, and patient safety.

The chart that follows illustrates the impacted areas resulting from the implementation of these strategies across the enterprise. Through the areas of impact from these strategies, the results will aid in positioning the enterprise with a competitive advantage in the market space.



As discussed within this paper, these strategies are the main catalysts for driving forms management initiatives. Too often the weak link in implementing these strategies is in not having a baseline with which to work from. To develop that baseline often a necessary starting point is to assess your current forms management environment.

Proper forms management does have continued payback over time once the necessary changes are implemented. But perhaps the greatest danger of all is not having the willingness to change in the first place.

Glossary of terms

CPOE— Computerized Provider/Physician Order Entry

Document Advisor—An onsite person whose responsibility is to make appropriate recommendations regarding the creation, revision, and production processes for forms.

eForms—Electronic Forms; computerized forms that allow for end user input captured at the computer terminal.

EMR/EPR—Electronic Medical Record / Electronic Patient Record. Today most patient records are paper based. EMR/EPR represent initiatives to migrate from paper to digital via computerization.

HIMSS— Health Information and Management System Society

HIPAA—Health Insurance Portability and Accountability ACT

HIS—Health Information System. This is the health information system or repository for the collection of Patient Health Information (PHI). This is most often computerized and used enterprise wide.

JCAHO—Joint Commission for the Accreditation of Healthcare Organizations. This commission performs reviews upon the hospitals and validates their compliance to various procedures. Upon conclusion, the hospitals are then rated for compliance.

PACS—Picture Archiving and Communications System

Print-on-Demand—a methodology for producing print output upon receipt of the order. Order is received and fulfilled usually within 24 hours.

PHI—Patient Health Information. Usually referenced as the patient's PHI, and contains various medical information regarding the patient's health condition.

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Kevin Hall is a 25-year veteran in project management and has spent a decade of that time dedicated to forms management within healthcare. Kevin has achieved the status of Project Management Professional (PMP) and has maintained that status through the Project Management Institute (PMI) for the past 7 years.

Xerox Global Services helps companies streamline their document-intensive forms management processes—everyday processes such as ordering forms, vendor management forms, creation/revision forms, obsolescence forms, and all associated back office processes such as monthly billing forms and departmental charge back. Our people work closely with clients to identify, quantify, and realize hidden opportunities to save money, find new sources of value, and simplify how work gets done.

For more information on how Xerox Global Services can apply forms management methodologies in your organization, visit www.xerox.com/globalservices.