Electronic Document Management
J. Mark Tuthill, MD, Henry Ford Health System

Electronic document management is important for the clinical laboratory in many ways. In this session we will review the definition of document management, understand the need of laboratory documentation management, review system selection and discuss the implementation of documentation management systems.

What is document management? Document management is currently a somewhat confused term with many vendors focused on document scanning and software, not electronic policy and procedure workflow management. Generically document management is a defined process for managing documents related to business processes. What I will be discussing today is software used for a computer based management of laboratory policies and procedures.

As you know, laboratories have huge numbers of documents extending upwards into the thousands. So why do we need a document management system? The process of managing documents is daunting and time consuming. Clinical laboratories have thousands of policies and procedures that they need to review annually. Electronic systems provide an efficient, effective, cost saving approach to managing such large catalogs of documents. Further, the College of American Pathologists accreditation requires that document management processes and policies be managed to handle laboratory policies and procedures. While there is not yet a requirement for a computer based system to be used, it is expected that in the future, these documents will be expected to be handled electronically. Document management is also a key component of ISO 15189 Laboratory Accreditation, which focuses in great detail on the control of documents: documents that are not controlled by a system are referred to as uncontrolled copies. The key benefit of a computer based document management system is elimination and/or identification of uncontrolled copies.

Paper based document management is a process, typically used laboratories in the old fashioned manner of having multiple policies and procedures in 3 ring binders distributed throughout the laboratory. These binders not only need to be reviewed annually by all members of the laboratory, but each must be signed by all designated content owners and laboratory leadership. Typically there is a complicated process of circulating paper documents between individuals and across laboratories. It is daunting to keep documents up to date and it is also difficult for staff to review and understand all of the different documents that may be available. Manual sign-off on paper documentation makes this even more arduous. Access to paper binders across different laboratories is difficult, often resulting in duplicate copies as well as incorrect versions of documents. This is due to the fact that updates are inserted into binders and this may not happen consistently across all laboratories. It is important that laboratories have a policy governing how these documents will be managed in the paper world.
Using an electronic process, document management consists of policies and procedures being managed online in computer based organizers. Annual review is managed online with electronic creation of documents as well as annual sign-off. It is very easy to update documents using an electronic versioning system. This also simplifies the process for circulating document and keeping them up to date. Such systems use e-mail notification and online quizzes to document that staff have been notified of updates, understand the changes, and have reviewed documents. Access to the online documents for laboratory and non-laboratory staff is facilitated by publishing either PDF’s or word file versions of the documents in a way that can be accessed by folks across a health care organization. Inherent to electronic systems is electronic governance of documents including dating, enforcing naming conventions, document management policies, and the cost of documents being under controlled. As mentioned previously computer based system both identify and eliminate the use of uncontrolled printed copies.

In order to implement a document management system, the first step is to select a system that will meet your needs. Our selection process used a formal RFI/RFP process that might be used across the laboratory for selection of such items as chemistry analyzers or laboratory information systems. Our process actually used internet and personal references to identify approximately 15 systems that were applicable to our work. We formed a laboratory work group to identify the requirements that we had for these systems and submitted a request for information to a variety of vendors. Based on these responses, we identified four vendors that were most feasible and suitable to our needs. We then submitted an “RFP” or request for proposal to these vendors using selection criterion developed by the laboratory work group. We defined an evaluation form to rate the various proposals and carefully reviewed the offerings. Based on the possible vendors who responded to the RFP, we conducted both live and web based demonstrations, reviewed product literature and specifications, analyzed cost and contract requirements, and interviewed current customers. Ultimately, we were able to rate and vet the different system providers with both the laboratory work group, laboratory leadership, and our pathology informatics team. While this took some months, it was well worth the effort based on the final system selection and our success today using this tool.

While I won’t review every specification that we went through, I did want to share with the audience the types of categories that we reviewed and for your intents and purposes I have presented those in the following slides. One of the first major categories we assessed was the **technology platform** to make sure the technology would work in our environment. We were particularly interested in how user authentication would occur and what was required for the system relevant to hardware and software implementation. We were also interested in security and whether the system would use active directory for security. In our particular case, running a Novell network, we needed to determine whether the system would work with a Novell environment. We also had interest in the **administrative aspects** of the system and how
the system would allow for users to be notified of updates or documents requiring laboratory signatures. The key components of the document management system are the **features** that are available to be used within the system. For example we were particularly interested if the system could use Microsoft Word as the word processing software. We also wanted to make sure that the document management system was searchable; that it used key wording; that we were able to use electronic signatures; and we that documents could be organized into what might effectively be thought of as an electronic 3-ring binder or what we have come to know as organizers. Obviously, version control of the documents that were being created, **financial** aspects of the system and information related to the survivability strength and age of **the company** were also important features for us to assess. In those last screens you just saw the entire set of criterion that we used for each of these categories.

Based on this criterion and applying a waiting system, our final selection was that of MasterControl’s document management suite (Salt Lake City, Utah). Master Control was developed specifically for the laboratory and is used across the country, including sites like the Center for Disease Control, ARUP, and the University of Massachusetts to name a few. It uses Microsoft word as a text editor including all of Microsoft Word’s features such as redlining. The application is entirely integrated with other Microsoft applications including PowerPoint, Excel and Visio allowing these types of documents to be managed and controlled as well. The system is a web based thin client software, with hardware requirements that were within our limitations. The system uses an email notification system and is a document management process using the concept of organizers which represent binders, as well as information cards that index each of the documents. Document sharing is enabled between different user groups eliminating duplication, and the system has a very flexible work flow. It was quite easy to import existing documents into master control. An external publication module exists allowing all documents in the documents management system be published as PDF’s viewable by all users on our network, but tied to the MasterControl system. The vendor was well known to be responsive, had a user group, and we noted significant system enhancements over the course of the year. Currently, we have recently implemented version 8.2 and will be upgrading to version 11 in a few months.

We also purchased MasterControl’s training module which allows us to verify and document employee review of documents. This module also has quizzes that can be built to make sure the users understand document content and will also meets CAP and ISO 15189 requirements for annual employee review. While we have yet to make extensive use of this system we intend to deploy it more effectively over time. Currently, we use our learning management system to document employee annual review and compliance.

Implementing a system like this is difficult and a very large, unrecognized area of effort. It is important to realize this will take your laboratory a number of years if you have anywhere near the number of documents that we have at Henry Ford. Selecting the
correct vendor is critically important to your success. Once you have purchased and implemented the system, the next phase is to implement your current documents, i.e. population the system with content. We had to ultimately design a new template that would allow us to address both ISO and CAP requirements; however, the CLSI document standard is a good point of departure for those of you looking to import your documents as they are. Be sure to look at your current file and document nomenclature to assess whether you need to redesign. This was an area that we had to do significant work on to create a consistent cross laboratory nomenclature. Examine your pending inspection window relevant to your implementation timeline. In other words, don’t implement your document management system when you expect inspectors walking in the door in the next couple of weeks. That said, as this will take some year to implement you will likely enter an inspection cycle without everything being perfect; we found inspectors to be impressed by our effort, and this project did not contribute to any deficiencies. Technical and software requirements of the system were such that they worked well in our environment. We actually chose to implement on a virtual machine clusters, including a web server that combined both our internet information server functionality as well as a PDF publisher. This has proven to be a source of a bottleneck for us and was not the recommended implementation by the manufacturer. We will be implementing a standalone PDF publishing server in our upgrade. We also use a Polyserve Microsoft Sequel database cluster. This technology is supported at our Henry Ford health system data center, and includes tape backups, system snapshots. Data is stored on a network attached storage system from EMC.

Most of our documents have been imported at this time, including a newly designed standard template for all of our documents and a standardized nomenclature for document naming. All imported documents have been placed into organizers. This is the first step to activating a division or customer group: get all of their old documents imported, the begin using the new template for the next cycle. All of our laboratory customers have now been trained in using the system, including all divisions of the laboratory as well as the bulk of hospitals that are located across the Tri-County Metro Detroit area. Documents for each completed organizers have been placed on our internet replacing all of our prior electronic documentation and are now accessible as PDF’s by anyone throughout the healthcare system. Most recently we have implemented a backup system and procedure that allows for the documents to be replicated onto a networked PC in our core lab area. This allows for the documents to be automatically updated as changes are made. Should the network go down, this central PC can be accessed by supervisory staff and documents can be faxed or otherwise distributed to those in remote locations. All of our documents in Master Control that I have alluded to are linked to our intranet website and all only controlled copies are now available to staff throughout the laboratories.
In the past 12 months, I have not had a significant financial interest or other relationship with the manufacturer(s) of the product(s) or provider(s) of the service(s) that will be discussed in my presentation.

This presentation will (not) include discussion of pharmaceuticals or devices that have not been approved by the FDA or unapproved or "off-label" uses of pharmaceuticals or devices.
Goal and Objectives

- Define document management
- Understand the need for electronic document management
- Review system selection
- Discuss implementation process
What is Document Management?

- Somewhat confused term currently
  - Many vendors are focused on document scanning software, not "electronic" policy and procedure workflow management
- Generic: a defined process for managing documents related to business processes
- What I will discuss is software for computer based management of laboratory policies and procedures
- Our labs have a huge number of such documents!
  - How about Yours?
Why do you Need Document Management?

- The process of managing documents is daunting and time consuming
  - Clinical laboratories have thousands of policies and procedures
  - Electronic systems provide efficient, effective, cost saving approach
- CAP accreditation requires a document management process/policy to handle laboratory policies and procedures
  - Not yet an electronic requirement
- A key component of ISO 15189 accreditation focuses on highly controlled management of documents
What is Document Management?

Paper

- Procedure and policy binders
- Annual review of policy and procedures
- Complicated process of circulating paper documents
  - Keeping them up to date
  - Documenting review and understanding by staff
- Manual sign off of each policy and procedure
- Access to paper binders across laboratories
- Updates by inserting new document versions to binders
- A policy governing how this will all be managed
What is Document Management?

Electronic

- Procedures and policies managed online in “organizers”
- Annual review managed online
- Electronic creation and sign-off
- Updates by electronic versioning
- Simplified process for circulating documents and keeping them up to date
  - Email notification
  - On line quizzes to documenting review and understanding by staff
- Access to online documents for laboratory and non-laboratory personnel
  - PDF’s, Word Documents
- Inherent electronic governance, dating and naming enforces document management policies: **controlled documents**!
System Selection
Selection Process
RFI and RFP Process

- Formal RFI and RFP process
  - Used the Internet and personal references to identify 10-15 systems that may be applicable
  - Formed lab working group to identify requirements
- Submitted RFI (Request for Information) to these vendors
  - Based on responses we identified 4 vendors that were most feasible
- Submitted an RFP (Request for Proposal) based on system selection criteria developed by the working group
- Defined an evaluation form to rate the various proposal
- Carefully reviewed offerings
Selection Process

- Evaluated possible vendors who responded to the RFP
  - Demonstrations
    - Live and web based
    - Product literature and specifications
  - Cost
  - Contract review
  - Ratings and outcomes were reviewed and vetted with the workgroup, laboratory leadership team, and informatics leadership
- This took months!
  - Well worth the effort and wait based on the final selection
<table>
<thead>
<tr>
<th>Number</th>
<th>Section</th>
<th>Query</th>
</tr>
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<tbody>
<tr>
<td>10.0</td>
<td>Technology Platform</td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Do you consider your software to be a turnkey solution?</td>
<td></td>
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<tr>
<td>1.2</td>
<td>Is the software designed to be deployed at a department level?</td>
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<tr>
<td>1.3</td>
<td>Specify hardware, operating system and database requirements</td>
<td></td>
</tr>
<tr>
<td>1.4</td>
<td>Does the system require a dedicated server?</td>
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</tr>
<tr>
<td>1.5</td>
<td>Specify networking requirements to implement and use your software.</td>
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</tr>
<tr>
<td>1.6</td>
<td>What database management systems are supported?</td>
<td></td>
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<tr>
<td>1.7</td>
<td>Client application: thick or thin?</td>
<td></td>
</tr>
<tr>
<td>1.8</td>
<td>How scalable is your system?</td>
<td></td>
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<tr>
<td>1.9</td>
<td>What routine maintenance is required?</td>
<td></td>
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<tr>
<td>1.10</td>
<td>Is there an archiving application built into the software?</td>
<td></td>
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<tr>
<td>1.11</td>
<td>Does archiving happen in real-time or does the system need to be offline?</td>
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<tr>
<td>1.12</td>
<td>Do you provide toll-free technical support within the USA?</td>
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<tr>
<td>1.13</td>
<td>What is the current version of the software?</td>
<td></td>
</tr>
<tr>
<td>1.14</td>
<td>Are new versions currently under development?</td>
<td></td>
</tr>
<tr>
<td>1.15</td>
<td>When upgrades occur, will existing documents and security parameters be automatically</td>
<td></td>
</tr>
</tbody>
</table>

| 2.0 Security |
| 2.1 | Is Active Directory supported for security |
| 2.2 | Is your system Novell™ compatible? |
| 2.3 | Can specific activities be assigned and audited? |
| 2.4 | Does the software allow for multiple facilities/locations with similar divisions? |
| 2.5 | Can user data be imported directly from third party products like Peoplesoft™, Novell™ and Active Directory™? |
| 2.6 | Can user information/permissions be easily modified? |
| 2.7 | How is security applied to individual users and groups? |

J. Mark Tuthill, MD, Henry Ford Hospital
### Specification Analysis

<table>
<thead>
<tr>
<th>Administrative</th>
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<tbody>
<tr>
<td>3.0</td>
<td>Does the software support assessment of target audience on the</td>
</tr>
<tr>
<td>3.1</td>
<td>content - current and updates? (Quizzing)</td>
</tr>
<tr>
<td>3.2</td>
<td>Does the system support automated notification for document</td>
</tr>
<tr>
<td>3.3</td>
<td>updates at pre-defined or user-defined periods?</td>
</tr>
<tr>
<td>3.4</td>
<td>Is there an online help system (within the application)?</td>
</tr>
<tr>
<td>3.5</td>
<td>Has your application been used in a diagnostic medical laboratory?</td>
</tr>
<tr>
<td>3.6</td>
<td>What specific feature(s) would be to particular advantage in the</td>
</tr>
<tr>
<td></td>
<td>diagnostic medical laboratory setting?</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Documentation Features</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>4.0</td>
<td>Can pre-existing documents be imported en-masse or individually</td>
</tr>
<tr>
<td>4.1</td>
<td>from another source?</td>
</tr>
<tr>
<td>4.2</td>
<td>Does your system support MS Word™ as the word processing</td>
</tr>
<tr>
<td>4.3</td>
<td>software?</td>
</tr>
<tr>
<td>4.4</td>
<td>If not, what is the text editor used by your system? (Eg. Word</td>
</tr>
<tr>
<td></td>
<td>Perfect™ or Native Editors)</td>
</tr>
<tr>
<td>4.5</td>
<td>Can it support incorporation of tables, flowcharts, images? (</td>
</tr>
<tr>
<td>4.6</td>
<td>Eg. Visio charts)</td>
</tr>
<tr>
<td>4.7</td>
<td>Can document templates be employed?</td>
</tr>
<tr>
<td>4.8</td>
<td>Can documents be scanned into the system?</td>
</tr>
<tr>
<td>4.9</td>
<td>Can a date/time stamp be put on a document?</td>
</tr>
<tr>
<td>4.10</td>
<td>Is key wording or tagging supported?</td>
</tr>
<tr>
<td>4.11</td>
<td>Is electronic searching supported?</td>
</tr>
<tr>
<td>4.12</td>
<td>Is hyperlinking supported - intradocument, interdocument and</td>
</tr>
<tr>
<td></td>
<td>interdepartment?</td>
</tr>
<tr>
<td>4.13</td>
<td>Can a single document be created/edited at one location and</td>
</tr>
<tr>
<td></td>
<td>shared with multiple locations? How would review and approval</td>
</tr>
<tr>
<td></td>
<td>process work for these documents?</td>
</tr>
<tr>
<td>4.14</td>
<td>Does your system support E signatures?</td>
</tr>
<tr>
<td>4.15</td>
<td>Will electronic signatures be permanent linked to and displayed</td>
</tr>
<tr>
<td></td>
<td>on the documents?</td>
</tr>
<tr>
<td>4.16</td>
<td>Will electronic signatures follow document through various</td>
</tr>
<tr>
<td></td>
<td>software upgrades?</td>
</tr>
<tr>
<td>4.17</td>
<td>Does the system have an automated page numbering facility?</td>
</tr>
<tr>
<td>4.18</td>
<td>Can an index be created automatically?</td>
</tr>
<tr>
<td>4.19</td>
<td>Are table of contents be created automatically?</td>
</tr>
<tr>
<td>4.20</td>
<td>Will the TOC adjust automatically if a section is added,</td>
</tr>
<tr>
<td></td>
<td>removed?</td>
</tr>
<tr>
<td>4.21</td>
<td>Can a specific policy, procedure, or entire manual be selected</td>
</tr>
<tr>
<td></td>
<td>and printed?</td>
</tr>
<tr>
<td>4.22</td>
<td>Can the document be printed out as an indexed book with a table</td>
</tr>
<tr>
<td></td>
<td>of contents?</td>
</tr>
<tr>
<td>4.23</td>
<td>Can a quiz be generated to test that targeted end-users have</td>
</tr>
<tr>
<td></td>
<td>reviewed a new policy or</td>
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J. Mark Tuthill, MD, Henry Ford Hospital
### Version Control

<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>67</td>
<td>0.0</td>
<td><strong>Version control</strong></td>
</tr>
<tr>
<td>68</td>
<td>1.0</td>
<td>What is the system for assigning unique identification name/number for each individual documents?</td>
</tr>
<tr>
<td>69</td>
<td>2.0</td>
<td>What is the process for tracking the lifecycle of a document?</td>
</tr>
<tr>
<td>70</td>
<td>3.0</td>
<td>Does the system use a document check-in/check-out system?</td>
</tr>
<tr>
<td>71</td>
<td>4.0</td>
<td>Can modifications be made to active documents and re-submitted for review?</td>
</tr>
<tr>
<td>72</td>
<td>5.0</td>
<td>How are updates to documents tracked?</td>
</tr>
<tr>
<td>73</td>
<td>6.0</td>
<td>Is versioning the only way to modify a document?</td>
</tr>
</tbody>
</table>

### Finance

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<table>
<thead>
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<th></th>
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</thead>
<tbody>
<tr>
<td>74</td>
<td>0.0</td>
<td><strong>Finance</strong></td>
</tr>
<tr>
<td>75</td>
<td>1.0</td>
<td>What is the cost of the system?</td>
</tr>
<tr>
<td>76</td>
<td>2.0</td>
<td>What is the licensing arrangement?</td>
</tr>
<tr>
<td>77</td>
<td>3.0</td>
<td>What are maintenance costs per annum?</td>
</tr>
<tr>
<td>78</td>
<td>4.0</td>
<td>Are upgrades included in the system costs?</td>
</tr>
<tr>
<td>79</td>
<td>5.0</td>
<td>Is the database included in the cost?</td>
</tr>
</tbody>
</table>

### Company Information

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>80</td>
<td>0.0</td>
<td><strong>Company Information</strong></td>
</tr>
<tr>
<td>81</td>
<td>1.0</td>
<td>What is the age of your company?</td>
</tr>
<tr>
<td>82</td>
<td>2.0</td>
<td>Provide a minimum of five customer references; name, address, phone, email?</td>
</tr>
<tr>
<td>83</td>
<td>3.0</td>
<td>Provide any references related to healthcare, specifically those related to the diagnostic medical laboratory on a similar scale?</td>
</tr>
<tr>
<td>84</td>
<td>4.0</td>
<td>Provide evidence of positive financial performance?</td>
</tr>
<tr>
<td>85</td>
<td>5.0</td>
<td>What is the future vision of your company?</td>
</tr>
<tr>
<td>86</td>
<td>6.0</td>
<td>What is the future direction of the product we are discussing?</td>
</tr>
<tr>
<td>87</td>
<td>7.0</td>
<td>Do you accept enhancement requests from customers?</td>
</tr>
</tbody>
</table>
Company Information

What is the age of your company?

Provide a minimum of five (5) customer references; name, address, phone, email?

Provide any references related to healthcare, specifically those related to the diagnostic medical laboratory on a similar scale?

Provide evidence of positive financial performance?

What is the future vision of your company?

What is the future direction of the product we are discussing?

Do you accept enhancement requests from customers?

Are enhancements requests seriously considered and implemented in future versions?

Do you monitor regulatory changes from the users standpoint that may effect the performance/usability of your product?

If a major regulatory requirement effects the layout, publication and storage of policy’s and procedure’s does your company alert its customers and provide an immediate upgrade to comply with new requirements, if needed.

Is your product ISO certified?
Final Selection

MasterControl Document Management Suite
v. 6.0
Salt Lake City, UT
MasterControl Features

- Suite of applications for laboratory management
- Uses MS Word as text editor and all of Word’s features
  - Tightly integrated with MS office application’s including PowerPoint, Excel, Visio etc.
- Web based (Thin Client) workflow application manages interaction with documents
- Hardware requirements within our limitations
- Email notification
- Flexible document management process
  - Organizers
  - “Info Cards”
  - Allowed sharing of documents between user groups
  - Flexible workflow
MasterControl
Features

- Ease of document import
- External web publication to non lab users
  - Documents can be hyperlinked and provided to non lab users
    - PDF publishing module
- Vendor responsiveness
  - User group
  - Updates/enhancements
  - We have driven several modifications
    - “Binder”
  - Version 8.2 is now implemented
MasterControl Features

- Training Module
  - Verification and documentation of employee review of documents
  - Uses quizzes to assure understanding of document content
  - Meets CAP and ISO 15189 requirements for annual employee review
Implementation
How to Get Started

- Go slow
  - This is a project that runs over years
- Select correct vendor
- Purchase and implement system
- Import current documents
- Design a new template that will address ISO/CAP requirements
  - CLSI standard is a good point of departure
- Examine current file, document nomenclature to assess whether redesign
- Examine inspection cycle relevant to implementation timeline
Technical Requirements

- Hardware and software requirements
- Implemented on Virtual Machine cluster
  - Web server MS Internet Information server
    - Combined with PDF publisher
  - “Polyserve” MS SQL cluster for database
- Supported on HFHS data center
  - Tape Backup, snapshots, EMC NAS storage
Current Status at Henry Ford

- Most documents have been imported in their original form (over 5000)
- Standard template for documents designed and implemented
- A standard nomenclature for document naming and numbering has been designed and implemented
- Imported documents are now being placed into “organizers”
  - This is the first step to activating a division or customer group
Current Status at Henry Ford

- Training for customers has been accomplished with laboratory divisions
  - Now proceeding across other hospital locations
- Documents for each completed organizer are placed on our intranet replacing prior document
- Migrated to enterprise hardware
- Upgraded to version 8.2
- Implemented ISO compliant templates
Current Status at Henry Ford

- Backup systems in place
  - Networked PC in core lab area
- Documents in MasterControl linked to our intranet website
- Controlled copies implemented
ISO Document Naming Convention

DOCUMEN
TITLE
LABEL (prefix)
NAME

Quality System Essentials (QSE)

Abbreviation | QSE Number
--- | ---
Organization | ORG | 1.0
Personnel | PER | 2.0
Equipment | EQM | 3.0
Purchasing and Inventory | PUR | 4.0
Process Control | PRC | 5.0
Documents and Records | DOC | 6.0
Information Management | INF | 7.0
Occurrence Management | OCC | 8.0
Assessments: External And Internal | ASM | 9.0
Process Improvement | PRI | 10.0
Customer Service | CUS | 11.0
Facilities and Safety | SAF | 12.0

TYPE OF DOCUMENT |
ABBREVIATION
--- | ---
Policy | pol
Process | prs
Procedure | pro
Standard Work | stw
Checklist | chk
Flow chart | flc
Form | frm
Photograph | pho
Power point | ppt
Screen shot | scr
Scanned document | scn
Table | tab
Video | Vid
MasterControl Portal > Task Tracking

Tracking Report: For Dr. Tuthill's Review - 21 Jun 2010

Doc-007 - 010 - Fake Document #7
HFHI-CYT-Policies-001 - 3 - Welcome to Cytology
Doc-001 - 006 - Testing the Master Control System - A...
HFHI-Molecular-Procedure-033 - 2 - 1p and 19q loss of heterozygosity assa...
HFHI-CYT-Technical-072 - 2 - Anal Swab
HFHI-PIN-Policies-025 - 3 - INF.PALM.PN.7.51.pol LABORATORY SYST...
HFHI-PIN-Policies-021 - 2 - PRC-PALM-PN-3.30-pol LABORATORY SYST...
HFHI-PIN-Policies-026 - 2 - PRC-PALM-PN-5.20-pol LABORATORY SYST...
HFHI-PIN-Policies-019 - 2 - PRC-PALM-PN-6.10-pol PATHOLOGY INFO...
HFHI-PIN-Policies-017 - 2 - PER-PALM-PN-2.10-pol PLANALYSTS PR...
HFHI-PIN-Policies-002 - 2 - ASM-PALM-PN-9.20-pol LABORATORY RES...
HFHI-PIN-Policies-004 - 2 - CUS-PALM-PN-11.10-pol PATHOLOGY INF...
HFHI-PIN-Policies-001 - 2 - ASM-PALM-PN-9.10-pol LABORATORY SYST...
HFHI-PIN-Policies-005 - 2 - CUS-PALM-PN-11.20-pol LABORATORY HI...

Doc-002 - 009 - Testing Master Control 2.0

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<th>Doc-007</th>
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<th>1-Collaboration</th>
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Head Informatics
- Notified: 21 Jun 2010, 1:07 PM
- Completed: n/a
- Status: Notified
- Leader?: None
- Comments: n/a

J. Mark Tuthill, MD, Henry Ford Hospital
This document is used to test the Master Control system.

9/18/2008

- Testing the one step approval process.
- This is my added content with track changes on. Jackie
- This content is edited with Tuthill's track changes
- What is the next step? Let's check in then accept all the changes in the next round.
- My second round of changes.
- Here are mine as well....can we sign off now?
- Next edit
- Testing upload

Testing scheduled tasks

Here are the changes I am adding to the document

- One
- Two
- Three
- Four
- Five
Sign Off on Collaboration: For Dr. Tuthill's Review

Enter your comments (if any) and sign off on the collaboration.

Comments
Jacie: this is about done. I redlined and made some changes. Please review.

Sign Off:
Collaboration

Electronic Signature

Status
Complete

Save

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Sign Off Task: Review 002 1
Enter your comments (if any) and approve the selected task.

Comments
Looks good now.

Sign Off: Review
*Electronic Signature

*Status
Reviewed

Save
Questions?