

DocuShare Use at St. Peter's Healthcare Services:

An Overview of Customer Experiences, Issues and Opportunities

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Overview







Members of the KWorks team in XR&T, in collaboration with the DocuShare team, visited St. Peter's Healthcare Services (SPHS) in November 2001, to understand how DocuShare is being used in this healthcare context.

St. Peters Healthcare Services, in Albany, New York, is a healthcare organization providing a range of services across 8 counties surrounding the Albany Capital region. The organization consists of about 12 different services organizations, which in addition to the main hospital include rehabilitation centers, addition recovery centers, long-term care facilities and lab facilities. SPHS employs about 4000 people, of which 800 are registered nurses, and potentially 1200 more are members of the clinical staff. This is a very enthusiastic Docushare customer site.

There are about 100 trained users with DocuShare accounts. These users have the ability to add and modify content to their department's DocuShare collections. The remaining staff access DocuShare as 'guests'. This customer is in the process of acquiring more DocuShare seats and is exploring the option of an enterprise site license.

We had the opportunity to talk to people in 6 key departments and the CIO. Specifically we asked them for an overview of their department's responsibilities and how they were using DocuShare in their department. We also asked them if they had any issues with DocuShare and if they had suggestions that would facilitate their work practices. We also answered several questions about current DocuShare capabilities. All of the discussions were videotaped.

One of the benefits of talking to a variety of departments is that we obtained multiple and diverse perspectives on the use of DocuShare in this organization. This provides a rich view into the use of this technology in this healthcare context. We reviewed the videotapes, creating notes and transcripts so we could accurately capture the details of our discussions. We have captured highlights for each department and organized them into 6 areas:

-  Site Background
-  Applications
-  Motivation/Needs
-  Technology Migration
-  Issues/Requests
-  Opportunities

We've tried to provide a one-page snapshot of highlights for each department. This organization makes it easier to look across the departments and note similarities and differences. It also gives a sense of what aspects of their DocuShare experience were shared by all the departments.

IT Department Staff

Site Background

- *Members of IT Department at SPHS*

- ✎ Provide IT support for entire SPHS system, which has facilities spread across an 8 county region in the Albany area.
 - ✎ Currently using DocuShare version 2.2. They have one DocuShare server that is accessible by all their organizations.
 - ✎ There are approximately 3000 PC's in their system. Every PC has a link to DocuShare from their home page.
 - ✎ Currently have 100 trained Docushare users. They have ability to create and manage collections for their respective departments.
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Applications

- *Make most current policies, procedures and forms available online.*
- *On-line request form*

- ✎ Putting various departmental policies, procedures and forms online and making them available to appropriate staff. Examples include:
 - ✎ Nursing staff accesses treatment procedures on the floor
 - ✎ Pharmacy puts drug information online for use at 3 pharmacies
 - ✎ Human Resources put all forms online for access by all employees.
 - ✎ Self-validating form on DocuShare to submit requests for internet access and page-block removal.
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Motivation/Needs

- *Accurate information*
- *Reduce costs*

- ✎ Keep materials up to date (accurate) and available in a central location for all those who need them
 - ✎ Reduce time, costs and errors associated with constantly updating policy and procedures documentation.
 - ✎ Ensure staff is using the most current forms and policy information.
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Technology Migration

- *Obtain organization buy-in*
- *Roll out to key departments first.*
- *Mandatory training*
- *Department Docushare champions*
- *Make technology readily available*
- *Eliminate hardcopy*
- *Trouble with initial install*

- ✎ The IT department obtained the buy-in from upper management and the department level managers for using DocuShare
 - ✎ Key departments who could most benefit from DocuShare were targeted as the first users.
 - ✎ Training is required for all Docushare users. This is provided in-house by the SPHS training and IT staff. They did comment that the help system in version 2.2 is very good.
 - ✎ Each department has a member of the staff who has completed the training and has volunteered to help get that department's materials into DocuShare (either by doing it themselves or helping other users).
 - ✎ DocuShare is accessible directly from the SPHS home page (which is the default home page on every PC).
 - ✎ Once materials are available in DocuShare, only one master paper version is kept in case of emergencies (PC's not available).
 - ✎ Stand-alone DS server didn't work well. Now integrated with existing web site. Relative links make cross-referencing easy.
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Continued ...

IT Department Staff (Con't)

Issues/Requests

- | | |
|---|---|
| <ul style="list-style-type: none">- <i>Linux version</i>- <i>View of where you are</i>- <i>File reorganization</i> - <i>Document routing</i> - <i>Electronic signature</i>- <i>On-line help desk</i>- <i>Import mainframe data</i> - <i>Make author accessible</i> | <ul style="list-style-type: none">☞ Request for Linux version of DocuShare.☞ Request for representation of the hierarchy of where a file came from☞ Orphan documents are a problem.☞ Difficult to reorganize documents in collections as collections grow and see new opportunities to reorganize the materials.☞ Simple document routing with user-definable route. Current solution with Outlook works but is fragile.☞ Need a secure way to sign documents along a route for authorization.☞ Provide chat mechanism with IT support staff in DocuShare.☞ SPHS has a report generator on their mainframe. Would like to get the report files onto DocuShare.☞ Make it easier to contact author of a document (perhaps make displayed name an email link). |
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Opportunities

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|--|--|
| <ul style="list-style-type: none">- <i>File reorganization</i>- <i>Site map</i>- <i>Import mainframe data</i> - <i>Make author accessible</i> | <ul style="list-style-type: none">☞ Provide ways for users to easily reorganize their collections☞ Provide views into the structure and organization of a site or set of collections☞ SPHS has a report generator on their mainframe. Would like to get the report files onto DocuShare.☞ Make it easier to contact author of a document (perhaps make displayed name an email link). |
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Chief Information Officer (CIO)

Site Background

- CIO of SPHS

- ✍ Responsible for IT operations and information technologies throughout St. Peters facilities.
- ✍ Enthusiastic supporter of DocuShare.
- ✍ “It’s turned into one of those quiet success stories.”
- ✍ Commented that their initial start up costs for DocuShare (~15K, 100 licenses) was “ridiculously small”.

Applications

- *Make Web-publishing tool available to hospital staff (IT manages tool, users manage content).*
- *Download Disaster Recovery Call List to Palm*
- *Reference materials for doctors (future)*
- *Reference materials for clients (future)*

- ✍ Putting various departmental policies, procedures and forms online and making them available to the staff.
- ✍ All HR forms are online in DocuShare. “New secretary has adopted it. It’s a fantastic success story...”
- ✍ Easy availability of latest version emergency call list: “Downloaded the Disaster Recovery Call List and put it into my Palm. It ain’t pretty because the columns don’t really come down well, but it’s there, and I’m the administrator on call every 10 weeks or whatever it is, so it doesn’t matter where I go, I don’t have to carry that big book.”
- ✍ Wants to use DS to make reference materials available to 300-400 doctors, both on-site and at off-site clinics. Possibly make non-commercial portion of materials available to non-SPHS doctors.
- ✍ Eventually expects they will make particular documents available to patients (e.g., Patients Bill of Rights, living wills, etc.)

Motivation/Needs

- *Documentation availability*
- *Accuracy of information*
- *User-managed content*
- *Integration with web site*

- ✍ Sees major benefits of Docushare as:
 - It makes all sorts of documentation available throughout the hospital system (4000 employees, 20 sites). “Saving paper is nice, but far more important is that the latest revision is always available.”
 - Content is managed by (selected) users

~~Integrated with rest of web site~~

Technology Migration

- *Obtain buy-in early on*

- ✍ Discussed how they’ve had past failures imposing technology on people. So when they decided on Docushare, things they did to obtain buy-in were 1) to provide training via regular classes and discussion groups, and 2) appointing ‘experts’ in each department.

Issues/Requests

- *Site license*
- *Read-only users*

- ✍ Request for affordable site license: “I just want to pay one fair price and have an enterprise thing, because DocuShare has become an enterprise success, really.”
- ✍ OR, request for low cost licensing for read-only Users (i.e., not guests, not full-fledged Users either; browse only but can subscribe, be listed in access groups, etc.) SPHS has maybe 100 contributing users but potentially several thousand read-only users.

- *File organization*

- ✍ ~~Only limitation is that files have to be organized alphabetically.~~

Opportunities

- *Customer-to-customer DocuShare endorsement*
- *Training materials*

- ✍ SPHS IT Department members are avid DocuShare users willing to share experiences.
- ✍ IT has developed and run training for internal use. May be willing to give materials to DocuShare team.

Human Resources Department

Site Background

- *Members of Human Resources department at SPHS:*
 - *Director of HR*
 - *HR Secretary*

- ✎ St. Peter's Healthcare Services is made up of 9 corporations with at total of 4300 employees. There is a 20% turnover rate.
- ✎ At the end of each year, HR microfiches employment records (consisting of documents in multiple sizes) of those who have left. Scanning was considered to be too time consuming.

Applications

- *Make most current HR policies, procedures and forms available online.*

- ✎ HR Department policy and procedures manual is in DocuShare.
- ✎ All HR forms are available in Docushare. There are about 20 standard forms. Forms are created on Microsoft Forms format.
- ✎ Docushare is the place to obtain most up-to-date forms.
- ✎ File organization in DocuShare: each file is a policy. They are listed alphabetically, which is same as in the hardcopy version.

Motivation/Needs

- *Accurate information*
- *Reduce costs*

- ✎ Keep HR policies and forms up to date (accurate) and available in a central location for all those who need them
- ✎ Reduce time, costs and errors associated with constantly updating policy and procedures documentation.
- ✎ Ensure staff is using the most current forms and policy information.
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Technology Migration

- *Complete DocuShare training.*
- *Remove paper copies of manuals once they are in DocuShare.*
- *Write and distribute special use instructions.*

- ✎ IT department trained new person in HR taking over DocuShare responsibilities for previous employee.
- ✎ Once HR policy manual and forms put online, all but 2 hardcopy versions were destroyed. One copy is in HR and the other is available to the nurses in case the system is down.
- ✎ HR sent instructions for filling out forms online to users.
- ✎ Less than 1% of completed forms are returned electronically.
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Issues/Requests

- *Puzzle: why users not filing forms electronically*
 - ✍ Not sure why more people aren't using electronic forms submission. There are still hardcopies available. They may figure they need *signatures* anyway, so they eventually have to create hardcopies.
- *HR forms tracking*
 - ✍ Current process for HR forms (when received in hardcopy):
 - HR checks for accuracy.
 - Data is keyed in by hand from hardcopy to mainframe system.
 - Hardcopy filed to maintain audit trail.
 - If originating department requested confirmation, this is sent from Data Entry group.
 - ✍ Manually transfer forms data from DocuShare to mainframe system.
 - ✍ Would like electronic signatures to provide a method of ensuring the appropriate person signed the HR form.
 - ✍ Would like a way to know how many people are accessing forms from DocuShare.
- *Auto data transfer*
- *Electronic signatures*
- *Forms usage*

Opportunities

- *Workflow*
 - ✍ Provide support for forms submission and approval tracking.
 - *Electronic signature*
 - ✍ Provide electronic signature capability (assuming they can get more users to start submitting forms electronically)
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Patient Care Services (Nursing)

Site Background

- Members of Patient Care Services at SPHS:
 - Nurse
 - Dept. Secretary
 - Dir. Education
- ✍ Provide Patient Care Services (Nursing)
 - ✍ Put Generic Standards Manual (bible for the staff) online in DocuShare. This manual has all procedural details for nursing (e.g., how to draw blood, take care of a GI bleed).
 - ✍ This was the first manual put online at SPHS, because it is so central to what the organization does...provide patient services.
 - ✍ There is a direct link to this collection from the SPHS home page, because nurses on the floor need very quick access to this information.
 - ✍ There are 800 RN's and approximately 2000 of the 4000 employees are clinical practitioners.

Applications

- *Make most current nursing procedures online at nursing stations.*
 - ✍ Put Generic Standards Manual online in DocuShare.
 - ✍ Nursing staff accesses treatment procedures on the floor
 - ✍ Nurses can (and do) printout specific procedures for reference or to clip to patient record for the next shift to refer to.
- *Job descriptions online*
 - ✍ Store most recent versions of job descriptions online. These are generic forms, each with different job descriptions that are used during staff evaluations.

Motivation/Needs

- *Accurate information*
 - *Reduce costs*
- ✎ Keep materials complete, up to date (accurate) and available in a central location for all those who need them.
 - ✎ Reduce time, costs and errors associated with constantly updating policy and procedures documentation.
 - ✎ Ensure staff is using the most current procedural information.
 - ✎ Eliminate incomplete, outdated materials from being propagated.

Technology Migration

- *Get key materials online*
 - *Make it available to nurses at their stations/floors*
 - *Eliminate the paper versions*
- ✎ Put all the nursing standards online and available to nurses on the floor.
 - ✎ Provided group and individual training for nurses at their stations.
 - ✎ Provided direct link to this collection from the homepage.
 - ✎ Soon after materials were made available online, they collected and destroyed all the paper versions (stored in huge binders) of the standards.
 - ✎ They maintain one backup paper copy in the Nursing Administration office.

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Issues/Requests

- *Care Map- scanning issue*
 - *Revisions*
 - *File reorganization*
- ✎ They have Care Maps (complex tables) that are impossible to put into electronic form without re-typing them. Too complex to accurately scan.
 - ✎ Would like to be able to REPLACE a previous version of a document rather than create a new one (when there are very minor changes to a document).

Opportunities

- *Support online courses*
- ✎ Put CD-based training courses online in DocuShare.
 - ✎ Training, testing, tracking, support for online classes from within DocuShare.
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Pharmacy (Formulary)

Site Background

- *Members of Pharmacy Department at SPHS*
- ✎ SPHS has 3 different pharmacies: Main pharmacy, Satellite pharmacy (2nd floor) and an Outpatient pharmacy. These serve 3 different populations.
 - ✎ Docushare serves a centralizing function across the 3 pharmacies, where information useful to all three is maintained.
 - ✎ SPHS is migrating to Autros Healthcare Systems product that automates nursing and pharmacy activities (e.g., drug ordering, screens for interactions, instructions for administering, scans meds/patient when administered, auto reordering). Used via PC, laptops, hand helds.
 - ✎ Anticipate they will use Autros in conjunction with DocuShare.

Applications

- *Maintain pharmacy policies and procedures online.*
 - *Formulary list of stocked medications*
 - *Pharmacy-related committees keep meeting agendas online.*
 - *Pharmacy newsletter online.*
 - *Drug order forms*
 - *HR forms*
- ☞ Keep all pharmacy policies and procedures in DocuShare. Look up information on DocuShare and often print to show others.
 - ☞ They maintain a list of drugs (Formulary list) they carry in the pharmacies. These often have drug information sheets created by the pharmacy to highlight specific details for particular drugs.
 - ☞ Sometimes include links to manufacturer's drug information sheets.
 - ☞ Committee meets every other month to consider changes to the formulary list and updates to DocuShare are made accordingly.
 - ☞ Agendas and membership for 4 committees are kept on DocuShare (Medication Safety, Medication User Evaluation, Pain Management, Pharmacy and Therapeutics).
 - ☞ Bi-weekly newsletter (InPHARMation) kept in DocuShare.
 - ☞ Put Drug order forms on DocuShare. These are printed and used at station/bedside to order patient medications. (Signed by doctor and carry it to pharmacy).
 - ☞ Access HR forms, download, fill-out forms and submit electronically.

Motivation/Needs

- *Accurate information*
 - *Reduce costs*
- ☞ Keep materials complete, up to date (accurate) and available in a central location for all those who need them.
 - ☞ Reduce time, costs and errors associated with constantly updating policy and procedures documentation.
 - ☞ Ensure staff is using the most current procedural information.
 - ☞ Eliminate incomplete, outdated materials from being propagated.

Technology Migration

- *Training and onsite support*
 - *Key information in DocuShare*
- ☞ One key person completed training and then she trained all the others in the pharmacy.
 - ☞ Pharmacy materials in DocuShare. Many of their paper references have been eliminated.
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Issues/Requests

- *Support pharmacy ordering*
 - *Support for reorganizing DocuShare collections and files*
- ☞ Enable email of employee requests to purchase medications at discount to pharmacy. (Utilizes a standard order form. Currently employees drop it off in paper and picks up prescription 1-2 days later).
 - ☞ DocuShare objects appear in alphabetical order, which is not necessarily the desired order. Need to fool the system (use *'s to force it to the top).
 - ☞ Difficult to reorganize collections and add new categories. This is a common problem as collections grow and evolve with use. Often use SEARCH function to by-pass unorganized collections.
 - ☞ ~~Would like to drag and drop files to put them in desired order.~~

Opportunities

- *Integration with hospital systems*
- ☞ Evaluate potential use of DocuShare in conjunction with healthcare applications such as Autros.
 - ☞ Explore ways to make reorganizing collections in DocuShare easier to do.
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Corporate Compliance Office

Site Background

- *Director of Corporate Compliance Office at SPHS*
 - ✎ The Compliance Officer must insure that St. Peter's is abiding by all federal government programs such as Medicare and Medicaid.
 - ✎ She must prevent and detect fraud or abuse in the hospital's dealings with the government.
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Applications

- *Make most current compliance plans online.*
 - ✎ All Compliance plans have been placed in DocuShare. The organization of the compliance site is patterned after Catholic Health East's site.
 - ✎ Employees can research the compliance site to educate themselves on fraud. Questions can be answered by email or phone. An 800 number is listed for those who wish to remain anonymous.
 - *Provide links to self-learning sites*
 - ✎ Methods for reporting fraud are given. The same 800 numbers for questions can be used to report fraud.
 - ✎ Presentations and URL's from phone-type conferences/meeting are posted on DocuShare.
 - ✎ Employees are also offered web-based training through links to self-learning sites. Compliance training links to CompliStar, a Price Waterhouse site.
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Motivation/Needs

- *Make compliance plans available*
 - ✎ It is necessary to keep compliance plans current and available to all staff. This is part of an effort to ensure they are abiding by all federal government program regulations, esp. medical claims.
 - *Provide information to employees regarding fraud and methods for reporting fraud*
 - ✎ Employees can research the compliance site to educate themselves on compliance issues.
 - ✎ Methods of reporting fraud are made available.
 - *Web-based training*
 - ✎ Educate employees about fraud.
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Technology Migration

- *Compliance plans online*
 - ✎ Completed DocuShare training.
 - *Eliminate hardcopies*
 - ✎ Previously maintained binders are no longer kept since all compliance plans are available in DocuShare.
 - *Links to self-learning sites*
 - ✎ Employee self-learning made available through links stored in DocuShare.
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Issues/Requests

- *Updating large documents*
 - ✎ When updating a large document, the whole document must be downloaded from the DocuShare, updated, and then uploaded. The user would like a way to update one or two pages without having to deal with the entire document.
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Opportunities

- *Searching*
 - ✎ She generally begins her searches on the Cornell University website. She might be interested in askOnce.
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Maintenance & Engineering Department

Site Background

- *Secretary to the Director of Facilities Management*
 - ✎ Her responsibilities include maintaining the Emergency Preparedness Manual and the Safety Manual, both electronically and in hardcopy versions throughout the hospital.
 - ✎ She takes minutes of Maintenance Department meetings, which are kept in paper form in binders and distributed in hardcopy. The only electronic version is stored on her PC.
 - ✎ All documents for her department are filed in binders and distributed. There are 70 employees in this department: 4 in the office and the rest in the main maintenance shop.
 - ✎ The maintenance shop has a paper-based system for processing and tracking work orders.





Applications

- *Maintain department DocuShare Collection*
- *Processing HR forms (several digital-paper transitions)*
 - ✎ The secretary maintains an electronic version of the Emergency Preparedness and Safety Manuals, which were on DocuShare about one year ago.
 - ✎ When updates to the manuals are required she corrects only the section requiring revision. Since this is not done often, she makes the correction, adds it to the DocuShare collection as a new file and then deletes the old version.
 - ✎ The department secretary retrieves employee evaluation forms from the HR DocuShare collection. The forms are filled out by department managers and returned to the secretary. She enters information into the electronic form, prints and returns the printed version to the managers for signature. Once signed, she makes copies for the managers' files and sends the original to the HR department. She has the only electronic version, without signature stored on her PC.
 - ✎ She calls the help desk with questions rather than use the help system.

Motivation/Needs

- *HR employee evaluation forms department managers*
 - ✎ Employee evaluations require use of most current HR forms (in DocuShare). Electronic signatures would speed the evaluation process although the secretary mentioned that the managers do not rely on electronic documents. They always print!
- *Current version of Emergency Preparedness & Safety Manuals online.*
 - ✎ Maintaining an electronic version of the Emergency Preparedness Manual and the Safety Manual in DocuShare allows all to view the latest version.

Technology Migration

- *Mandatory training*
 - *Manuals online in DocuShare*
 - *Keep manuals updated in electronic and hardcopy forms*
 - *Department is paper-centric*
-  DocuShare training was given at secretary's desk
 -  As more members of the hospital community have electronic access, hardcopy manuals could be phased out.
 -  Department management will not rely on electronic storage of documents. HR forms are printed for the managers to complete. Storage is always paper.
 -  The maintenance shop has a paper-based system for processing and tracking work orders. They do not plan to change this system.
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Continued...

Maintenance & Engineering Department (Con't)

Issues/Requests

- *Ordering of files within a collection* She had to use letters as a prefix in front of each document in order to get them to appear in the right (desired) order in DocuShare.
- *Confusion about creating new versions in DocuShare* She created a new version of a file in DocuShare by opening the file, making the needed changes, and then saving. When DocuShare told her file already exists she continues by creating the new file and then deleting the old file.

Opportunities

- *Electronic signatures* Requested electronic signatures to facilitate processing human resource forms although she anticipates resistance from managers within her department
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Conclusions

St. Peter's Healthcare Services is an enthusiastic DocuShare customer, utilizing this technology in key departments throughout the organization. Their primary focus is on providing a wide range of healthcare services to their community. In this context, they've found that DocuShare enables them to maintain accurate, up-to-date policies and procedures documents, centrally located and accessible to all staff. By putting these materials online in DocuShare, they have reduced the costs and errors associated with updating and maintaining hardcopy documents that needed to be distributed throughout the organization.

Once they decided that DocuShare would facilitate many of their organization goals, they took a very serious look at what it would take for this community to adopt this technology and incorporate it into their existing work practices. They obtained management and staff buy-in and made a significant investment to provide the tools so that DocuShare could be used in critical work activities. Tools included training (initially they developed their own training course), appointing department champions to look out for their department's needs and providing regular user feedback forums.

DocuShare is being used, although to varying degrees, in each of the departments we met with. This site represents a range of users, from those who are still primarily paper-based, to those relying primarily on digital documents. In all cases, they've each made the initial step to put their mission critical documents and forms online in DocuShare.

An additional outcome of conducting this study was that this customer was very appreciative that Xerox DocuShare made the effort to listen to them about their uses, issues and requests for future DocuShare capabilities. They see some of their requests being addressed by the next DocuShare release. Xerox left the impression that we are truly interested in the voice of the customer. St. Peter's Healthcare Services has been generous in their efforts to share their enthusiasm and experiences with other healthcare providers.

References

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