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# Reduction of Unnecessary Scanning to Lower Costs While Preserving the Integrity of the Legal Health Record

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Reduction of Unnecessary Scanning to Lower Costs While Preserving

the Integrity of the Legal Health Record

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Abstract

The purpose of the paper is to explain the efforts taken at Rocky Mountain Clinic to reduce scanning of unnecessary documents into their Electronic Health Record (EHR). An EHR is a digital version of a patient's medical paper chart. EHRs are real-time, patient-centered records that make information available instantly and securely to authorized users. (United States Department of Health and Human Services Office of the National Coordinator for Health Information Technology, 2017) The use of an EHR requires paper documents to be scanned into the system so they are available electronically within the patient's EHR.

Research was completed to determine documents required as part of the patient's Legal Health Record (LHR). A LHR is any item, collection, or grouping of a patient's individually identifiable health information that is created, received or maintained, in paper, or electronic form, by or for SCL Health in their ordinary course of business in any medium, collected and directly used in documenting health status. (SCL Health, 2016) The information obtained from the research was used as a guideline to determine documents unnecessarily scanned by the clinics.

Analysis of unnecessary documents scanned during 2016 was completed and a review of the requirements of a LHR led to a plan to reduce documents unnecessarily scanned. The project focused on the reduction of three types of documents in the initial phase; extended care documents, other facility miscellaneous documents and consent forms. A time study was completed on the tasks associated with scanning documents, and a cost analysis was prepared to show the labor costs for scanning the unnecessary documents.

The goal of the project was to improve efficiency and reduce costs associated with time spent on scanning unnecessary documents. Reducing time spent on scanning unnecessary documents allows associates to focus on scanning pertinent documents or allows time to complete other

tasks. Appropriate documents should be scanned daily to ensure the documents are available in the patient's record timely.

The results of the study showed a slight reduction in unnecessary documents scanned in a short period of time. The results of the project were presented to the HIM Ambulatory team for use in working towards a system wide change. SCL Health plans on finalizing a system wide policy as well as a guideline for scanning appropriate documents. The policy and guideline will be rolled out to all clinics within the system. Follow up with Rocky Mountain Clinic will be provided to explain the progress made and they will be encouraged to continue making improvements.

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SCL Health is a faith-based, nonprofit health organization dedicated to improving the health of the people and communities served. SCL Health has 11 Hospitals and over 210 Ambulatory Service Centers located in Colorado, Kansas and Montana. (SCL Health, 2017) Improving efficiency and reducing unnecessary costs is a system wide effort and each department can make an impact to the organization.

In order to improve efficiency and reduce costs, the Health Information Management (HIM) Ambulatory team plans on reducing scanning of unnecessary documents in the ambulatory clinics located in Colorado, Kansas, and Montana. Reducing scanning of unnecessary documents will make an impact within the organization for several reasons. For example, resources of time and effort will be saved, the quality of the patient's legal health record will be improved, and documents will be available in the EHR timely ensuring they are available for patient care. Scanning of unnecessary documents is a waste of resources in time and effort for the associates processing the documents. The time spent scanning the unnecessary documents could be spent scanning important items such as ultrasound results or lab reports, or could be spent completing other duties.

According to SCL Health's Health Record-Document Management Policy, documents are to be scanned daily. (SCL Health, 2015) Unfortunately, scanning is not always a high priority as other tasks often take precedence. In many cases, documents remain in piles until associates have time to process the items to be scanned. For example, in the smaller specialty clinics, the front office patient representative is responsible for checking in patients for their appointment,

answering the phones, managing incoming referrals, obtaining pre-authorizations from insurance companies, and scanning among other duties. Checking patients in for their appointments and answering patient's phone calls often takes priority over other tasks.

In order to standardize scanning and take some of the burden off of the clinics, SCL Health is considering the use of a vendor to manage scanning. The vendor's turn-around time is within 2-4 hours of the documents being scanned into the vendor's system. The vendor charges per page scanned, so reducing unnecessary scanning now will help prepare the organization for the upcoming implementation. The acute (hospital based) HIM departments within SCL Health already uses the vendor and is seeing positive impacts in their efforts.

In order to improve efficiency now and to prepare for the implementation of the vendor, work is currently being completed in the HIM Ambulatory department to develop a system wide policy and scanning reduction guidelines. Once the policy and guidelines are developed and approved by senior leadership, the HIM Business Analysts will provide guidance and support to their assigned clinics. Implementing a system wide policy and scanning reduction guideline will take some time to get in place. In the meantime, it is important for analysis and preparation to take place so the HIM Ambulatory team is ready when the policy is approved.

While the team is waiting on a system approved policy and scanning reduction guidelines, the HIM Ambulatory Director agreed to a limited pilot project at Rocky Mountain Clinic in Butte, MT. Rocky Mountain Clinic has been receptive to other pilot programs in the past and they were open to participating in the scanning reduction project. In Butte, implementing changes in the past has been successful because of local leadership support, relationships with different teams and associates involved in the changes, and the associate's willingness to make improvements. The following information will provide additional details of

the software used in the clinic, and the process associates are required to complete when scanning documents into the system.

The EHR used within SCL Health is eSummit. eSummit is SCL Health's version of Epic. The image capture/scanning software used is OnBase. An interface exists between eSummit and OnBase so once a document is processed in OnBase it is integrated and viewable in eSummit. Each document requires an eSummit encounter number or medical record number in order to be processed. The documents are not viewable in eSummit until they are fully processed in OnBase. The process for scanning includes the following steps: sorting and preparation of the documents, scanning, indexing and quality assurance. Each step in the process must be followed to ensure each document is accurately scanned into the correct patient record and is available when needed to provide quality patient care.

Three types of documents are scanned into OnBase; full barcode, encounter only, and no barcode. Full barcode and encounter only documents are the most efficient documents to process. No barcode documents require additional steps and are more time consuming to process. For example, no barcode documents require additional work to prepare the documents for scanning. The preparation process of no barcode documents includes an analysis of each document to determine if the document can be tied to an existing encounter in eSummit or if an encounter needs to be created. Therefore, each document to be processed requires the user to look the patient up in eSummit as part of the analysis process. The process for scanning full barcode, encounter only and no barcode documents varies, so each process is described below.

Full barcode documents are printed from eSummit and contains two barcodes. One barcode is read by OnBase and provides information on the document type, and the other barcode provides details on the encounter and patient the document is for. An example of a full

barcode document is a consent for treatment form printed from eSummit when the patient is checked in for their appointment. When full barcode documents are scanned into OnBase, a pile of like documents are placed into the scanner. The user selects the full barcode scan queue and then clicks on the scan button in OnBase. The documents are automatically fed through the scanner. OnBase reads each of the barcodes and separates each document out by patient and assigns the appropriate document type to each document. Once OnBase has processed the batch of documents, a user performs quality assurance in order to verify each document is tied to the correct patient.

Encounter only documents are documents used during the patient's office visit such as a consent for procedures or a patient questionnaire. An intermec label is printed out of eSummit by the user processing the document and the label is placed on the document. The label provides information on the encounter and the patient the document is for. The user indicates the appropriate document type and selects the encounter only scan queue. The user then clicks on the scan button in OnBase. The documents are automatically fed through the scanner. OnBase reads the encounter label and separates each document out by patient. The document type chosen at the beginning of the process is assigned to each document. Once OnBase has processed the batch of documents, a user has to perform quality assurance in order to verify each document is tied to the correct patient.

The no barcode documents require additional preparation and processing than full barcode or encounter only documents because no printed barcodes or labels are on the documents. Examples of no barcode documents are documents sent by an outside organization for informational purposes. The outside documents usually requires an encounter to be created by the user prior to scanning the documents. All no barcode documents are scanned one at a time

into a batch after the no barcode scan queue is selected. The user places one document in the scanner and selects the scan button. Once the first document is fed through the scanner, the user then places the next document into the scanner, and selects the scan button. The process of scanning one document at a time occurs until the user scans all of the documents in the batch. Once the documents are scanned into the system, the user has to index each of the documents in the batch. The indexing process requires the user to manually enter the encounter number into OnBase for each of the documents in the batch. Once the documents are indexed, a user has to perform quality assurance verifying each document is tied to the correct patient.

The processes described for full barcode, encounter only and no barcode scanning must be followed in order to ensure accuracy and quality of the patient's record. Appropriate documents need to be scanned in a timely manner to ensure the documents are available electronically for patient care. The purpose of the project is to reduce scanning of unnecessary documents to improve efficiency and reduce unnecessary costs within the organization. The goal of the project is to demonstrate a reduction in scanning of unnecessary documents during the project.

## Project Objectives

The following project objectives were created and followed for the scanning reduction project:

- Research state requirements for documents required in the legal health record.
- Research industry standards for what should be scanned in the legal health record.
- Review SCL health policies and procedures for legal health record.
- Identify documents unnecessarily scanned.

- Develop a plan to reduce scanning of documents identified as improperly scanned.

- Complete time study.

- Determine potential labor cost savings to the organization.

- Work with leadership for support and approval of scanning reduction.

- Implement plan.

- Re-evaluate and review data to see if reduction occurred.

- Provide future recommendations for ongoing work.

- Review challenges.

- Provide a conclusion of the results of the project.

The paper follows the objectives of the project, with the next three sections outlining the research and review of relevant laws, industry standards, and internal policies, which will guide the work for improvements in the scanning process.

**Research state requirements for documents required in the legal health record**

First, in order to understand what scanning can be eliminated, an understanding of the requirements of the legal documentation was researched. The legal health record follows state requirements, which in many cases may be similar to other states but differ in retention periods. The requirements items to be retained in the legal health record in Montana includes the following: all medical notes, test results, correspondence, other written records regularly maintained by a medical provider, and all reports, correspondence, and other reports authored by a medical provider. (State of Montana, 2017) The retention period for medical records in clinics in Montana is 6 years after the patient's discharge or death for adults, and is 6 years after the patient turns 18 or dies if earlier. (Health Information, 2017)

**Research industry standards for what should be scanned in the legal health record**

After a review of the legal requirements, the next step was to research industry standards for what should be scanned in the medical record. The purpose of this step was to determine if best practices exist that may be used for the project. The American Health Information Management Association (AHIMA) and the Health Information Management System Society (HIMSS) organizations are often referenced in the Health Information Management (HIM) field. AHIMA is noted as the premier association of HIM professionals worldwide and has more than 103,000 HIM professionals as members. AHIMA is recognized as the leading source of "HIM knowledge," and is a resource for education and training for their members. (AHIMA, 2017) HIMSS is a global organization focused on better health through information technology. HIMSS leads efforts to optimize health engagement and care outcomes using information technology and they have over 52,000 members worldwide. (HIMSS, 2017) AHIMA information can be found at [www.ahima.org](www.ahima.org), and HIMSS information can be found at [www.himss.org](www.himss.org).

AHIMA provides industry guidelines on scanning and they released a Release of Information Toolkit which includes definitions of the legal health record and designated record set, as well as recommended practices. AHIMA's guidelines and definitions have been integrated in SCL Health's policies. Unfortunately the information on scanning requirements found was mostly geared towards clinics implementing an EHR from a paper system rather than dealing with ongoing scanning needs. However, the information obtained from AHIMA on the definition of a legal health record (LHR) and designated record set (DRS) and release of information (ROI) have been integrated into SCL Health's policies. Therefore, the next step was to refer to the SCL Health policies for guidance.

**Review SCL health policies and procedures for legal health record**

After referencing the relevant policy manuals, the following SCL health policies and supporting documents were reviewed: Legal Health Record and Designated Record Set Policy, Legal Health Record and Designated Record Set Supporting Document, Health Records-Retention and Destruction Policy and the Health Record Document Management Policy. First, the Legal Health Record and Designated Record Set Policy defines the legal health record and the designated record. The purpose of the policy is to ensure care sites are in compliance with the federal and state laws for maintenance of, access to, and disclosure of a patient health records. (SCL Health, 2016) SCL Health's definition of a Legal Health Record (LHR) is any item, collection, or grouping of a patient's individually identifiable health information that is created, received or maintained, in paper, or electronic form, by or for SCL Health in their ordinary course of business in any medium, collected and directly used in documenting health status. (SCL Health, 2016)

Second, the Designated Record Set (DRS) is a group of records maintained by or for a covered entity that is: the medical records and billing records about individuals maintained by or for a covered health care provider; the enrollment, payment, claims adjudication, and case or medical management record systems maintained by or for a health plan; or used, in whole or in part, by or for the covered entity to make decisions about individuals. (SCL Health, 2016) The policy contains a supporting document showing health record components and if they apply to the legal health record or the designated record set.  The supporting document was used as a main guideline for reviewing documents scanned to determine if they were necessary.

Third, the Health Record-retention and Destruction policy explains the retention and destruction of health records according to applicable Federal and State laws and regulations. All

records are to be retained for a specified period and have to be properly disposed of when storage

timeline has passed. Anything scanned into the health record falls under the retention guidelines.

In Montana, free standing clinics are only required to retain records for 6 years following death

or last visit. If the patient is under 18, records are to be retained for 6 years after the patient turns

18 or dies. Hospitals are required to retain records for 10 years. If the patient is under 18, records

are to be retained for 10 years after the patient turns 18 or dies. (State of Montana, 2017) SCL

Health agreed to 10 year retention time in Montana to be in line with the hospital retention

requirements and retention time required in Colorado. (SCL Health, 2016)

Fourth, the Health Record Document Management Policy is designed to provide

guidelines for processing and converting paper based medical records to the current document

imaging system which is OnBase. (SCL Health, 2015) According to the policy, the documents

are to be collected at least once per day. All medical record documents shall be prepped prior to

scanning. Documents should be scanned daily using OnBase. All scanned documents should be

indexed and QA'd (Quality Assurance) within 24 hours of being scanned. It is recommended

someone different QA the documents than who scanned and indexed them for increased data

integrity. The documents scanned are to be retained for 90 days prior to destruction. (SCL

Health, 2015)

After completing a review of information available from AHIMA and HIMSS, and

reviewing SCL Health's policies mentioned above, it was determined that the relevant legal

requirements, both internally and for the state of Montana, were located in the SCL Health's

policies. As such, the SCL Health policies satisfy the requirements of the project, and are

therefore used in preceding sections.  The next step in the project objective was to complete a

review of documents scanned to determine if they were necessary.

**Identify documents unnecessarily scanned**

The information reviewed in the above mentioned SCL Health policies was used as the main source of guidance during the evaluation of scanned documents. In order to identify documents unnecessarily scanned, scan data was reviewed over the last two years using two different formats. The first was from an older report the HIM Ambulatory team used up until the beginning of 2017. Each month, a report was received from the OnBase team. From the monthly report, a pivot table was created to total document type documents scanned per clinic. The information from the pivot table was manually entered into an Excel spreadsheet for trending and review of the current month to the previous months.

The second report used was from a Tableau dashboard recently implemented for trial use within the HIM Ambulatory department. In the beginning of the data review portion of the project, inconsistencies in the Tableau data were discovered. Work was done to ensure the same parameters were used in the new Tableau report consistent with the previous report. Once the correct parameters were put into place, the data was validated in the Tableau reports by comparing the results to the previous reports used.

The document types used most frequently were compared to the LHR and DRS supporting document. The following documents as shown below in Table 1 were determined to either not require scanning, or need further consideration before scanning. Some of the documents requiring further consideration in the table require additional resources and efforts to make a changes. For example, the letters and orders should be documented in eSummit, rather than being documented on paper. The Ambulatory Informatics team and the Medical Director will need to be involved to help change the current process. The main focus for the project was

for a reduction to extended care documents, consent forms, and records from outside facilities

(referred to as other facility-misc.).

**Table 1 Findings and plan presented to Rocky Mountain Clinic**

| DOCUMENT / Doc Type | EXPLANATION | PLAN |
|---|---|---|
| Extended Care Documents | Extended care documents are sent to the nursing home and are part of the nursing home's legal health record.<br><br>Extended care documentation is not included on the LHR and DRS Health Record Components. | These should not be scanned. They are to be placed in a holding area for 90 days. After 90 days, the documents will be destroyed. |
| Consent to treat forms | As of 10/31/2016, the clinics only need to collect one per year, per region.  The clinics were collecting one per visit, per clinic before the change. The change in consent collection was a system wide effort and was approved by SCL Health's Legal and Compliance department. | PSR Staff to indicate in the docs and additional information table when one is collected: SBHN mm/dd/yyyy. |
| Records from outside facilities | When a patient transfers care, the clinics often receive records from other facilities. Some providers want all pages scanned.<br><br>Records from outside facilities are not indicated as a LHR or DRS health record component. | If providers do not review and flag the documents, they will be placed in a holding area for 90 days. After 90 days, the records will be destroyed. |
| Care Everywhere | Records from other facilities on Epic can be viewed using Care Everywhere.<br><br>Care Everywhere documents are not indicated as a LHR or DRS health record component. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |

| DOCUMENT / Doc Type | EXPLANATION | PLAN |
|---|---|---|
| Forms filled out by providers or clinical staff | Camp forms, work physicals, return to work, School Physicals, Releases for work or school. The clinics have been scanning these just in case the patients lose them.<br><br>These documents filled out by providers or clinical staff are not indicated as a LHR or DRS health record component. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |
| Letters | Letters should be documented in Epic in the letters section rather than being handwritten. Some providers handwrite the letters on prescription pads or paper, and request the item be scanned in. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |
| Immunization Record | Immunization record information should abstracted into the patient's record.<br><br>Immunization History is considered to be part of the LRH and DRS health record components. However, Immunization information is abstracted by clinical staff into the ERH. The immunization report is retrieved from the state immunization registry. Since the immunization record is abstracted and the information can be retrieved from the state immunization registry, the paper record should not be scanned. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |
| Orders | Orders information should be completed in the patient's record in Epic. Some providers handwrite orders on prescription pads or paper and request the item be scanned in. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |
| Orders Prescription | Orders should be completed electronically in the patient's record in Epic. Some providers handwrite orders on prescription pads or paper and request the item be scanned in. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |

| DOCUMENT / Doc Type | EXPLANATION | PLAN |
|---|---|---|
| Incoming Referrals | Epic has a referral module. Incoming referrals should be documented in Epic electronically rather than scanning in the paper referral document. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |
| Correspondence | Documents filled out by the clinical staff: sports physicals, FLMA forms, Handicap parking sticker applications, etc. are held onto in case the patient loses them.<br><br>Correspondence documents are not indicated as a LHR or DRS health record component. | HIM to hold these for analysis by HIM Ambulatory and Ambulatory Informatics. |

**Develop a plan to reduce scanning of documents identified as improperly scanned**

For the pilot project, the documents identified as unnecessarily scanned were presented to the clinic's associates for review and input. From the discussion with the scanning associates, a plan was formed and the associates agreed to follow the plan. The associates agreed to focus on the extended care, consent forms and other facility miscellaneous documents for the project as items that did not need immediate scanning. The associates agreed to be mindful of the other documents indicated in the plan to determine recommendations with other teams for a future reduction. The details of the plan were indicated in Table 1 in conjunction with the items determined were unnecessarily scanned. Using the identified documents listed, the next step in the project was to perform a time study analysis.

**Perform time study analysis**

A time study analysis was performed both in person and from associate feedback using a standard tracking form. The following information was collected during the in person time study;

time spent preparing documents for scanning, time spent scanning documents, time spent indexing documents, and time spent performing quality review on the documents. The tasks were timed over three different onsite visits with one associate at Rocky Mountain Clinic.

Twenty-five associates in sixteen different clinics in Butte, Billings and Denver were asked to track time spent on prepping documents, indexing documents, and performing quality review on the documents. The associates were also asked to record the number of pages processed during each task, and to collect data for 5 days. Twenty associates completed the time study. Some associates completed the form electronically and some documented the information on paper. When the time study results were received, the information was compiled together into one excel spreadsheet. An average time spent on each task was calculated based upon information gathered from both time studies, with a summary of results listed below.

The indexing task results showed it took 449 minutes to index 1,095 pages. The calculation for average pages per hour is (1095/449)*60=146 pages per hour. The quality assurance results showed it took 182 minutes to quality review 752 pages. The calculation for average pages per hour is (752/182) *60=248 pages per hour. No barcode documents take an average of 2 minutes to prepare (determine document type and create an eSummit encounter to scan the document). Using the average of 2 minutes per document, a user can prepare 30 no barcode documents per hour. Scanning of no barcode documents takes on average one minute to scan 2.8 pages.  Using an average of 2.8 documents being scanned per minute, a user can scan 168 pages per hour.

Full barcode or encounter only document preparation is faster than preparing or scanning a no barcode document, as indexing is not required unless OnBase in unable to read the barcode. On average a user can prepare 5 full barcode and encounter only documents in 1 minute. Using

the average of 5 documents per minute, a user could prepare 300 documents per hour. Scanning full barcode or encounter only documents on average takes 1 minute to scan 10 pages, therefore 600 pages can be scanned in one hour. Table 2 below shows the average times calculated from the time study.

Table 2: Average times calculated for processing No Barcode and Full Barcode Documents

| No Barcode Documents Time Study Calculations | | | |
|---|---|---|---|
| **Preparation Time** | **Scan Time** | **Index Time** | **Quality Assurance Time** |
| 30 documents per hour | 168 pages per hour | 146 pages per hour | 248 pages per hour |
| Full Barcode Documents Time Study Results | | | |
| **Preparation Time** | **Scan Time** | **Index Time** | **Quality Assurance Time** |
| 300 documents per hour | 600 pages per hour | N/A | 248 pages per hour |

The average time calculated for each task was used to determine potential labor cost savings the organization could experience by reducing the scanning of unnecessary documents.

**Determine Potential labor cost savings to the organization**

In order to determine the potential labor cost savings, each job type that performs a scanning task was included. The HIM Ambulatory team collected job titles from those scanning within SCL Health and sent the titles to the human resources department. The job titles held by those who scan include but are not limited to the following; rep-customer care, medical receptionist, health information specialist I, health information specialist II, secretary,

receptionist, lead-front office, medical assistant, specialist-patient registration, lead medical

assistant, lead medical records, and business coordinator. Pay rate ranges were received from the

Human Resource department for associates who spent time scanning in the clinics.

Based on the information received from Human Resources, the average pay rate was

calculated as $13.00 per hour. The Human Resources department indicated the hourly rate for

benefits for full time associates was $3.25 per hour. Therefore, the hourly pay rate was estimated

at $16.25. Using the estimates developed from the time study, the data from the OnBase reports

on pages scanned by document type in 2016, and the average hourly pay rate, the following cost

estimates indicated in Table 3 and Table 4 were calculated for the extended care documents,

other facility miscellaneous documents and consent forms scanned in 2016.

Table 3: Costs calculated on items scanned at Rocky Mountain Clinic in 2016

| Rocky Mountain Clinic Document Review for 2016 Scans | | | | | | | |
|---|---|---|---|---|---|---|---|
| Document Type | Total Pages Scanned | Document Prep Time Hours | Scanning Time Hours | Index Time Hours | Quality Assurance Time Hours | Total Hours | Cost Total (Hours * $16.25) |
| Extended Care | 5,754 | 192 | 34 | 39 | 23 | 289 | $4,691 |
| Other Facility-Misc | 38,012 | 1,267 | 226 | 260 | 153 | 1,907 | $30,988 |
| Consent Forms | 35,027 | 117 | 58 | 0 | 141 | 316 | $5,141 |
| **Total Cost to Scan these Documents in 2016** | | | | | | | **$40,820** |

Table 4: Costs calculated on items scanned within SCL Health in 2016

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SCL Health Document Review for 2016 Scans** | | | | | | | |
| Document Type | Total Pages Scanned | Document Prep Time Hours | Scanning Time Hours | Index Time Hours | Quality Assurance Time Hours | Total Hours | Cost Total (Hours * $16.25) |
| Extended Care | 70,664 | 2,355 | 421 | 484 | 285 | 3,545 | $57,607 |
| Other Facility-Misc | 1,054,745 | 35,158 | 6,278 | 7,224 | 4,253 | 52,914 | $859,848 |
| Consent Forms | 555,863 | 1,853 | 926 | 0 | 2,241 | 5,021 | $81,586 |
| **Total Cost to Scan these Documents in 2016** | | | | | | | **$999,040** |

Both Table 3 and Table 4 show that both the local clinic and the system as a whole can potentially save money in terms of labor cost for those document types that are unnecessarily scanned. As such, the information was be provided to leadership to highlight the potential labor savings impact associated with reducing scanning of the extended care documents, consent forms, and records received from outside facilities, also referred to other facility misc. records. Given the positive results, the next step in the project was working with leadership for support and approval to implement reduction of scanning of unnecessary documents.

The results of the documents identified as unnecessarily scanned, the plan for reducing the documents, the results of the time study, and the potential labor cost savings were presented to clinic leadership. Leadership was very open to implementing the plan and agreed to do so. Ongoing communication occurred during the initial stages of the project so their support was

available from the beginning of the project. The next step in the project was to officially implement the scanning reduction plan.

**Implement Plan**

Recommendations were presented to clinic leadership and the HIM scanning associates as an ongoing discussion between November 2016 and March 2017. The goal for ongoing discussions was to give opportunity for feedback, questions and concerns. In mid-November, the clinic was behind on scanning all documents and were frustrated with the time they were spending on prepping and scanning extended care documents. The manager agreed to allow the scanning staff to place those documents in a holding area so other documents could be processed. The extended care documents were then filed alphabetically by month in a filing cabinet located in medical records.

On October 31, 2016, a new process for collecting consent forms was communicated out system wide. All clinics were notified to collect one consent form per patient, per region, per year, as opposed to collecting the consent form at every patient visit in every clinic. At first, the adoption of the change was rather slow. It took the associates a few months to change their habit of collecting them at every visit, so ongoing communication was occurring to get everyone using the same process.

Per the project plan, a meeting was held on March 6th 2017informing associates of the official changes for extended care documents, consent forms, and records from outside facilities. The plan to track other documents defined in the plan was addressed.  The associates were educated on following the plan, including follow up and tracking of items scanned. The associate's main concern was provider reaction. Given the concern, the associates agreed to reach out to the project managers if any complaints were received in order to address any

concerns in a timely manner. Given the number of changes, the communication plan included in-person follow up and weekly e-mails to ensure all questions and concerns were properly addressed.

In performing the education and communication plan, the determination to stop scanning extended care documents was a concern for one of the nurses in particular. The extended care documents are signed by the provider and sent back to the nursing home. The extended care documents belong to the nursing home, and are part of the nursing home's legal health record, and are not part of the clinic's legal health record. Further, the patients are not seen in the clinic as the provider goes onsite to the nursing home for their visits. The biggest concern from the nurse was "what if the nursing home doesn't receive the fax and we need to resend them?" Through communication and a review of the process as listed in part below, the nurse's concern was addressed.

Another document type of concerns are records coming in from other facilities.  For example, when a patient is referred or transfers care, the clinics will often receive hundreds of pages of records. The providers are asked to review the documents to determine what items they are going to use as part of the patient's care.  Some providers have responded with "I don't have time to review all of those pages, just scan it all." Others have embraced the request to reduce scanning. If the provider sends all of the records back without reviewing, the records are being placed in a holding area for 90 days. At the end of the 90 days, the provider is given the opportunity to review the documents again. If the provider chooses not to review, the documents will be destroyed.  In 2016, 38,012 pages of other facility documents were scanned at Rocky Mountain Clinic. Of note, out of all of the clinics SCL Health in Montana, Colorado, and Kansas, Rocky Mountain clinic ranks 3rd in the top 5 clinics with the highest volume of other facility

miscellaneous documents scanned. As such, a decrease in scanning from records from other facilities alone should make an impact.

The focus on the extended care, consent forms and records from outside facilities was the main focus of the plan, and associates agreed to make the necessary changes. Following implementation, the next step in the process was to re-evaluate and review data to see if a reduction occurred.

**Re-evaluate and review data to see if reduction occurred**

When the March 2017 scan data was available in Tableau, the data was compared to the corresponding report received from the OnBase team for items scanned in March. The data was validated and the document totals were compared to totals calculated in previous months. Further, in January 2017, a total of 1,586 consent forms were scanned, and in March 2017, a total of 1,127 consent forms were scanned resulting in a 29% reduction. In February and March, no extended care documents were scanned. In January 2017, a total of 5,648 other facility pages were scanned, and in March 2017, a total of 2,297 other facility pages were scanned resulting in a 59% reduction. The results were a reduction in unnecessary documents scanned. As such, the preliminary results along with the decrease indicates the plan has a positive impact.

The clinic has indicated that more time is spent scanning necessary documents as opposed to unnecessary documents with a reduction in the back log of scanning. Important documents are being scanned into the system more timely and are available for patient care. Figure 1 and 2 below shows the reduction in extended care documents, consent forms and outside records scanned at Rocky Mountain Clinic from January 2016 through March 2017.

Figure 1: Documents scanned at Rocky Mountain Clinic from January 2016 through March 2017.



Number of Documents Scanned at Rocky Mountain Clinic
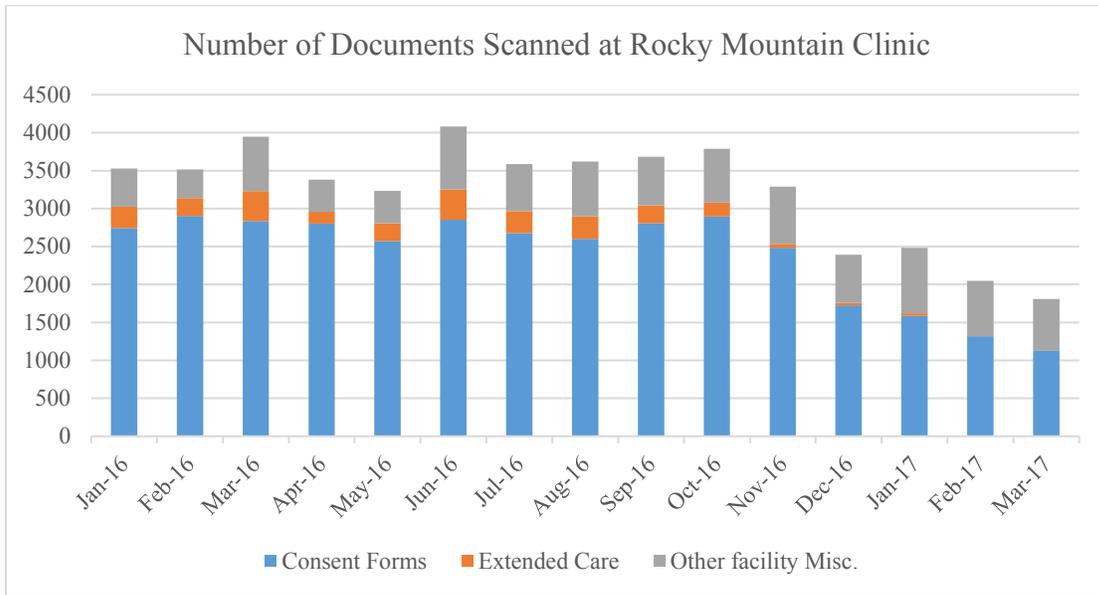
Figure 2: Number of pages scanned at Rocky Mountain Clinic from January 2016 through March 2017.



Number of Pages Scanned at Rocky Mountain Clinic
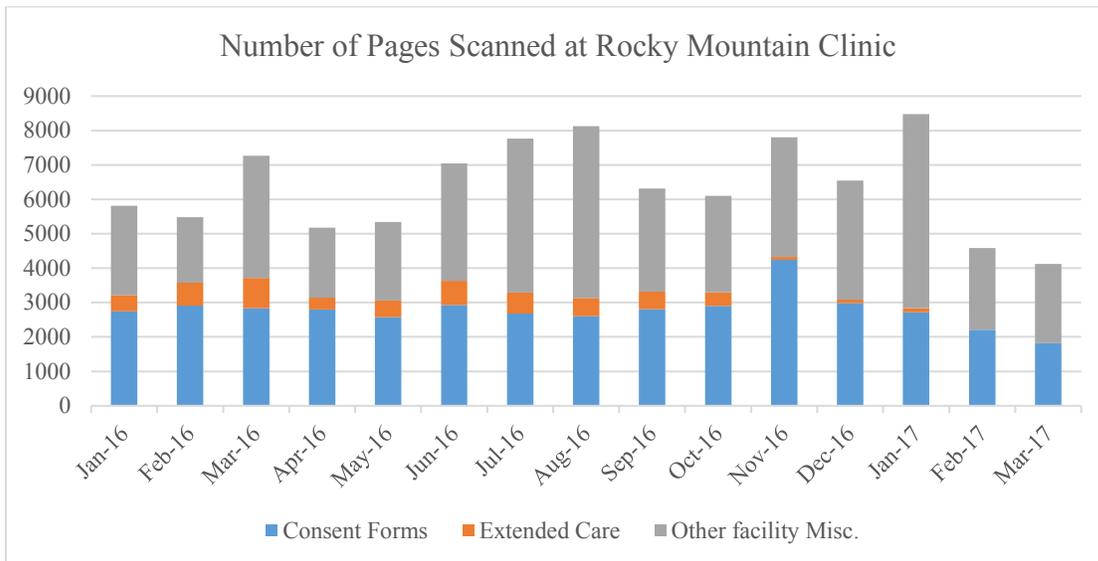
As a pilot project, the plan to reduce scanning of unnecessary documents was officially implemented on March 6, 2017. One weakness of the project for academic purposes was the

short time period. However, from a pilot project perspective, a reduction of unnecessary scanning occurred. Further, the clinic is interested in working towards additional reduction. The reduction experienced at Rocky Mountain Clinic has a potential impact to make a larger system wide change within SCL Health.

## Long Term Plan and Future Opportunities

The results from the re-evaluation will be presented to the clinic associates and leadership, with the recommendation to continue with the current efforts.  The results will also be presented to the entire HIM Ambulatory team. The recommendations for future actions include SCL Health finalizing and implementing a system wide policy and scanning guideline based on the documents types listed in the project. When the policy and guideline is approved, the recommendation is for the HIM Business Analysts to work with their assignment clinics to implement the necessary changes. In the meantime, Rocky Mountain Clinic is recommended to continue to follow the plan put in place during the project. The initial reduction of scanning unnecessary documents at Rocky Mountain Clinic can be utilized to show the potential impact of a system wide change. If one clinic can make an initial impact in a short period of time, imagine the opportunity for impact in over 210 clinics system wide. However, it is worth noting that few challenges were experienced during the project, which are described in the next section.

## Challenges

As mentioned, in order to implement the pilot plan on a larger scale, it is worth reviewing challenges of the project. The challenges included change management, staffing assignment changes, and a new reporting tool with data inconsistencies. The first challenge was changing habits and dealing with change management. Given the nature of health care, managing change

is a complex process. Effective change has been characterized as unfreezing old behaviors, introducing new ones, and re-freezing them. (Al-Abri, 2007) Change management is known as the process which an organization takes for creating a vision for change and then empowering individuals to act as change agents to work towards that vision. (Nancy M. Lorenzi, 2000) The associates were informed of the changes and why the changes were necessary. Ongoing communication and follow up with the associates occurred so questions and concerns could be addressed.

An example of a change management challenge was seen with the consent form collection change. The clinics are to collect one consent, per patient, per region, per year as of October 31, 2016. Prior to the change, the registration staff would collect a consent form for every patient they checked in, so remembering the new process took some me. Work was done with re-educating and reminding the associates on the new process, and after time, they became more comfortable with following the new process.  After re-education and reminders were provided, the data showed a decline in the consents being collected in the clinic.

In January and February, a redistribution of work occurred for an associate who normally scanned at least four hours per day. The new assignment cut out the time the associate had available for scanning, so scanning is occurring as time permits. . The redistribution in work caused a back log in items being scanned into the system. To accommodate for the change, additional associates have received training to assist with scanning. Two users who scan at another clinic in Butte were given access to Rocky Mountain Clinic's scan queues so they could assist. Onsite training was completed with the two associates to cover the differences in documents scanned at Rocky Mountain Clinic. Some of the documents were different than the

documents the associates normally process in their clinic so they needed some education prior to processing for Rocky Mountain Clinic.

Further, another user went through the full training process. First, before a user obtains access to scan into OnBase, they have to attend a class room training session which lasts 6.5 hours. At the end of the class, the associate is required to pass assessments on the material covered. The results of the assessments are sent into the OnBase team who will then grant the user access to OnBase. It normally takes around 2-3 days for an associate to receive access to OnBase once training has been completed. Next, after the associate receives access to OnBase, an onsite training session is scheduled in the clinic.  The onsite training session allows the associate time to prepare, scan, index, and perform quality assurance on their clinic's documents while they have assistance through the process. The onsite session is also used to verify the user has the appropriate access and is comfortable with the process before being asked to do it on their own.

The last challenge experienced was with data in the new reports available in Tableau. SCL Health has created and is growing a Data Analytics team, and Tableau is one of the tools being used for performing data analytics. The Tableau reports were made available to the HIM Ambulatory team in January and all scan data from OnBase for 2016 was loaded into the database. The database is updated with current information at least once per week. The Tableau reports gives the HIM Ambulatory team access to data quickly in one place in a matter of minutes. Prior to these reports being available, the HIM Ambulatory team would have to depend on others for information. When the information was received, the data was processed to create totals, graphs, etc., and in some cases, information was pulled together from multiple reports.

Overall, the use of the new reports has been very positive. However, during the project, some inconsistencies in totals were discovered.

Prior to the Tableau report being made available, the HIM Ambulatory team would receive a monthly report from the OnBase team of all items scanned in an Excel spreadsheet in order to perform a retrospective quality review audit of items scanned. The Excel report was made available during the first week of the month and would contain data for all items processed during the previous month. For example, the report for items scanned in December would be generated and sent during the first week of January. The HIM Ambulatory team would then pull data for each clinic from the Excel spreadsheet by creating filters or creating pivot tables. The totals for the top document types used were then inputted into a spreadsheet so totals from month to month could be compared and tracked.

While comparing the report totals generated in Tableau against the report totals normally used by the HIM Ambulatory team, inconsistencies in some of the totals were discovered. The January and February Excel reports were requested from the OnBase team and another comparison was completed. For example, the February scan report from the OnBase team showed 1,779 consent forms scanned in Butte, while the Tableau report showed 1,584 consent forms scanned. The excel report showed 778 other facility miscellaneous documents scanned in Butte in February, while the Tableau report showed 715 other facility miscellaneous documents scanned. The inconsistencies were sent to the Data Analytics team along with the parameters for the report used by the OnBase team. After changes were made in Tableau by the Data Analytics team, the figures were compared again and the data was validated.

## **Conclusion**

SCL Health has a system wide initiative to improve efficiency and reduce unnecessary costs. In order to improve efficiency and reduce costs, the (HIM) Ambulatory team plans on reducing scanning of unnecessary documents in the ambulatory clinics located in Colorado, Kansas, and Montana. The project focused on reducing scanning at Rocky Mountain Clinic for three documents determined to be unnecessary as part of the legal health record and designated record set. The three documents were extended care documents, consent forms for every visit, and records received from outside facilities.

In a short period of time, initial progress was made toward reducing unnecessary scanning at Rocky Mountain Clinic. For example, the data showed a reduction in consent forms scanned between January 2017 and March 2017 was 29%.  A reduction of outside records between January 2017 and March 2017 was 59%. No extended care documents were scanned in February and March. In 2016, 5,754 pages of extended care documents were scanned. The reduction in extended care documents scanned in February and March is promising. Rocky Mountain Clinic is already experiencing positive impacts from reducing the unnecessary scanning during the project. The clinic has made substantial efforts in reducing their scanning backlog so important documents are available in the EHR and are available for patient care rather than sitting in a pile of items to be scanned.

The purpose of the project was to reduce scanning of unnecessary documents at Rocky Mountain Clinic and positive results were indicated. The work done during the pilot project at Rocky Mountain Clinic will be used towards the system wide initiative. Although challenges were present during the project, the clinic worked through the challenges and experienced progress in reducing scanning of unnecessary documents.

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