



## ROI for Medical Billing

How medical billing departments and organizations can realize a significant return on investment from digital document management with integrated workflow technology

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# Introduction

As part of our ongoing commitment to help healthcare organizations solve operational and business management challenges, Laserfiche® is pleased to present the third in a series of healthcare-focused white papers. These white papers have been specifically developed for both healthcare provider organizations and the companies that provide services to them. These white papers describe how healthcare-focused organizations can use technology and implement innovative processes to increase productivity and efficiency.

This paper explores how a technology implementation in internal medical billing departments and at third-party billing companies can deliver a significant return on investment with faster collections, quantifiable cost reductions and significant productivity gains. This report documents the return on investment of implementing a best-of-class electronic document management solution.

We invite you to learn more about how you can achieve these results by visiting [www.laserfiche.com/webinar](http://www.laserfiche.com/webinar) to sign up for one of our regularly scheduled medical billing webinars.

## Using Technology to Maximize Claim Collections

It is the job of a medical billing department or organization to maximize the revenue per claim and minimize the cost per claim processed. **The total administrative cost of processing a medical claim can be as high as \$10 per claim, yet an average of 30 percent of all medical claims sent to insurance companies never get paid.** On top of that, it is not uncommon for an insurance company to take up to three months to process paper claims, which can make it difficult to provide consistent, quality medical care. The burden falls on billing departments and organizations to maximize collections, decrease the number of denied claims and ultimately increase cash flow.

Billing managers who use technology to improve the billing process can dramatically improve collection times and amounts, and many have started down that path. For example, a study by America's Health Insurance Plans (AHIP) shows that three-quarters of all health insurance claims are now submitted electronically, up from 24 percent in 1995, enabling 98 percent of claims to be processed within a month of receipt. Further, the study found that some insurers process electronically submitted claims as quickly as within a week of receipt.

There is another technology that can dramatically streamline billing and coding processes and shorten the revenue collection cycle. An electronic document management solution (EDMS) that includes workflow technology offers the ideal solution for any billing environment. This technology delivers simplified and faster coding and billing work processes, improved client service and reduced overhead expenses, which ultimately results in appreciable dollar savings and a substantial return on investment.

The previous white paper in this series, *Simplifying the Business of Healthcare*, highlights the many functional areas—in addition to billing—that can benefit from using a digital document management solution. We invite you to visit [www.laserfiche.com/simplify](http://www.laserfiche.com/simplify) to download this white paper and learn more.

## ROI: The Bottom Line

With an investment in digital document management and workflow technology, medical billing entities can save anywhere from \$145,000 a year in annual operational costs for single-facility billing departments to upwards of \$1,500,000 for large billing organizations.

## Key Areas of Impact on Return on Investment

Our in-depth study of billing departments and billing organizations has identified several key areas where an investment in electronic document management with integrated workflow technology has an identifiable impact and delivers a substantial return on investment: claim processing efficiencies, workflow automation efficiencies, EOB management, administrative efficiencies and space efficiencies.

Using a traditional cost-benefit analysis and variable cost factors common to all billing organizations, we've identified, calculated and detailed the return on investment for digital document management with integrated workflow technology. Please refer to the appendix for the full analysis.

## Summary of Savings by Organization Size

Size of Organization	Single Facility	Multi-Facility	Third-Party Medical Billing
Overhead Savings	\$7,155	\$27,315	\$120,300
Staff Savings	\$30,140	\$90,419	\$301,395
Space Savings	\$55,181	\$151,144	\$465,413
Workflow Automation Savings	\$32,452	\$97,356	\$324,519
EOB Management Savings	\$30,829	\$92,488	\$308,293

## A Note on Methodology

The size of a billing organization can range from a few staff to hundreds of employees, with employees added as the number of claims processed grows. Cost factors include the number of claims, average number of pages per claim, average processing time per claim, average payroll costs, and the percentage of claims that must be processed in paper or hardcopy format, including those received electronically but printed for compilation. All of these variables and more have been taken into account in our study.

Savings percentages are derived from Laserfiche's 20-year history and experience with over 25,000 installations worldwide. In this white paper, we present results for the following types of organizations as represented by our customers:

- Single-facility billing departments: 75,000 claims processed annually.
- Multi-facility billing departments: 225,000 claims processed annually.
- Third-party billing organizations: 750,000+ claims processed annually.

An ROI calculator is available upon request. With this tool, you can plug in your own variables and calculate the savings your organization will realize by implementing digital document management technology.

A number of steps are required to generate and file a medical claim from a patient encounter, including documentation compilation, quality control, financial verification, coding, billing input and claim processing. Often, these steps involve one or more staff members, and this simple list belies the complexity and effort involved in each of these steps.

The work processes involved in generating and filing a claim can be dramatically streamlined with document management. These benefits are further enhanced by implementing an electronic document workflow process to automatically guide the file through the required stages.

## Claim Processing Efficiencies

Source documentation can vary from a single encounter form to a multi-page file of supporting records. Portions arrive at different times and in a variety of formats that include paper, electronic documents and electronic data files. And documents may be received in a variety of ways, including physical delivery, fax, e-mail, CDs and FTP site uploads. In fact, without a digital document management system, the most effective way to compile and review the disparate documentation is often to print everything received electronically, which wastes time and resources.

Providers that have implemented an EMR/EHR application can send an electronic data file, which in effect transfers the printing and paper costs to the billing organization. The mail room becomes the initial record assembly area, where documentation is sorted into patient batches and folders are created and labeled. Documents are then routed to the first step or staff in the workflow process, which is typically quality control. Too often, duplicate files are received, which doesn't just double the cost of compilation, but also requires staff to identify them as duplicates and then delete them.

## Compilation of Disparate Data

With a document management solution, physically received documentation is still sorted, but instead of creating and routing physical batches and files, the paper documents are immediately scanned, data is automatically extracted and indexed, documents are automatically named and electronic files are automatically created and routed to the next staff person. If demographic data for the patient already resides in the billing application, it can be automatically retrieved and used to populate index fields in the document management system, eliminating data entry. Scanned documents and electronic records are stored in a HIPAA-compliant secure repository where relevant access can be controlled at the folder, document or even field level.

A best-of-class document management solution can automatically take files received in disparate formats, such as paper and fax, convert them all into a single, non-proprietary electronic format and proceed with automatic indexing, naming and routing. Even when scanned data is delivered on CD or uploaded to an FTP site, time is spent transferring the data to appropriate staff, creating electronic folders, and manually naming the records in a fashion that facilitates retrieving the records. If records are misfiled or misnamed, it is extremely time consuming to locate them or recreate them. Advanced features available in best-of-class solutions can monitor network folders for incoming FTP uploads or electronically received faxes and immediately process and assemble the file, without requiring staff intervention.

Savings arise from the reduced man-hours of batch and file creation, as well as reduced office supply requirements, but much more dramatic savings are generated when scanning can be implemented where the source documentation originates—at the remote office or provider site. This immediately eliminates the significant cost of daily physical transportation. For the same or less effort it takes to copy a chart, the records can be scanned across the Web, directly into the repository in the billing environment, saving mailing and shipping costs.

**A multi-facility billing department can reduce costs by up to \$120,000 annually with a remote capture environment.**

Size of Organization	Single Facility	Multi-Facility	Third-Party Medical Billing
Incoming Shipments Eliminated	—	585	4,875
<b>Savings</b>	—	\$5,850	\$48,750
Shipments Eliminated To/From Coders	—	900	7,500
<b>Savings</b>	—	\$9,000	\$75,000

## Quality Control

In any billing environment, there are expected delays in the receipt of key information that must be included in the file. For example, transcribed doctor's notes may be received 24 to 48 hours after the date of service. These notes are often received as electronic documents, faxes or Word documents that must be downloaded from the transcription service Website.

And, of course, missing or incomplete information must also be flagged and requested from the originator. An efficient department may have a procedure for flagging pending items by date, but it is not uncommon for pending items to languish without follow-up, with the accompanying cost of delayed revenue collection.

It is also common to receive missing documentation in a different format than the rest of the documentation. It's quicker to receive the missing documentation by fax or e-mail, but the only way to compile and effectively review the multi-format documentation is to open, convert and physically print everything received from all sources. Additional time spent processing each file quickly turns into hours, or even days, of unnecessary labor.

A best-of-class document management solution flags missing documentation and converts and appends additional pages to a file. Information received by electronic fax can be automatically imported and processed into the repository. And e-mail notifications ensure that any missing information is received and processed on a timely basis.

**A three minute time savings per claim translates into cost savings of \$65,000 to \$650,000 annually, depending on the number of claims processed.**

## Financial Verification

Verification of payer coverage early in the billing process is a best practice. Fortunately, many payers now offer the capability of verifying insurance coverage on the Web, and, in most billing environments, a screen shot is typically printed for record-keeping purposes.

With a document management system, the HTML page—or any other electronic record—can be printed to a non-proprietary archival format, captured into the repository and indexed for searching. Without completion of this critical step, the workflow cannot progress.

**Even though the quantifiable financial impact of these features is minimal (pennies per verification), it is an important contributor to the simplified billing processes that ultimately decreases the time to collection.**

## Coding and Data Entry

Medical billing organizations—regardless of size—struggle with locating qualified coders. Particularly when combined with limited on-site physical space, the ability to employ remote coders and provide immediate Web access to source documentation results in more highly skilled workers at a lower cost.

**The cost of physically transporting the documentation to coders and back to the office can be almost completely eliminated, resulting in savings of \$75,000 annually for a third-party billing organization.**

Where the coding function is separate from the billing input function, the coder typically provides the codes to the billing data entry clerks by writing on the source documentation or an accompanying form. With a digital document management system, codes can be typed into predefined template fields, immediately reducing the likelihood of misreads and, more importantly, generating significant time savings on data entry.

The bulk of the work for billing entry clerks focuses on two types of data:

**Demographic information:** Normally, a billing clerk inputs or revises demographic information for every encounter. A document management system can automatically capture data from source documentation and export it into the billing system, saving a significant amount of time for billing clerks.

**Coding information:** As noted in the coding section above, a billing clerk normally inputs data that a coder has written on the source documentation or special form. With a document management system, the coder provides the codes in template fields and the data is exported to the billing application, eliminating the double entry.

**The combined savings in data entry FTEs represent one of the larger opportunities for savings. According to Laserfiche analysis, a staffing reduction of up to 60 percent is possible by reducing data entry.**

Size of Organization	Single Facility	Multi-Facility	Third-Party Medical Billing
Reduction in Data Entry FTE	63%	63%	63%
Savings	\$30,140	\$90,419	\$301,395

# Workflow Management

In a typical environment, the claim file is physically moved from one staff person's desk to another. If coders work remotely, the paper file must be physically shipped in both directions. Procedures may be implemented to ensure that each step is accomplished on a timely basis, but with paper files, there is an inevitable cumulative delay that negatively affects collection times.

With workflow technology, you ensure timely claim processing with e-mail notifications that inform a supervisor if a step has not been taken within a pre-defined amount of time. The documents are automatically moved along the process based on pre-defined rules and actions taken. Document flags and status fields not only identify items requiring follow-up, but also allow you to prioritize required actions and create work lists. Electronic annotations provide documentation and a digital audit trail. Follow-up e-mails and faxes can be generated directly from within the application and specific document.

Workflow technology provides an enforceable, consistent, procedural structure that minimizes errors and generates quantifiable operational efficiency data for management. The impact of workflow efficiencies in reducing total overhead costs is substantial, and can be quantified in terms of time savings. Five or ten minutes saved per claim multiplied by the number of claims processed translates into significant cost reductions.

A recent Laserfiche study found that billing staff spend, on average, 20-30 minutes per claim on the initial processing procedures and tasks. With a digital workflow, that number can be reduced by a minimum of ten percent.

**For single-facility billing departments, time savings equate to \$32,000 in annual savings, for multi-facility billing departments, \$97,000 in annual savings, while third-party billing organizations realize \$325,000 in annual savings.**

Size of Organization	Single Facility	Multi-Facility	Third-Party Medical Billing
File Supply Savings	\$3,105	\$9,315	\$31,050
Printing Cost Savings	\$4,050	\$12,150	\$40,500
Incoming Shipment Savings	—	\$5,850	\$48,750
Shipments Eliminated To/From Coders	—	\$9,000	\$75,000
% Reduction in Data Entry FTE	63%	63%	63%
<b>Workflow Efficiency Savings</b>	<b>\$32,452</b>	<b>\$97,356</b>	<b>\$324,519</b>

# Automate Billing Work Processes—and Get Paid Faster

## Document Types

- Paper documents.
- Electronic documents.
- Faxes.
- CDs.
- FTP upload.
- E-mail.
- HL7/ANSI.

## Import and Capture

- Import electronic documents.
- Monitor network FTP, fax and e-mail folders for automatic import.
- Sort paper documentation and scan into EDMS.
- Convert electronic documents to non-proprietary TIFF format for long-term archival.
- Automatically name, file and index documents.
- Extract information from your billing application to fill in template fields.

## Billing and Coding

- Record billing codes, notes and annotations on the archived image.
- Input billing information manually from annotated charge forms, or integrate your billing application with EDMS to automatically pull billing codes from the annotated images.

## Workflow and Work Lists

- Route charge forms to appropriate personnel for verification, coding and billing input.
- Create work lists based on client, date of service, follow-up flags or other user-defined fields.

## Claim Submission

- Transmit electronic claims via a clearinghouse.\*
- Mail hardcopy claims to payer.\*

## EOB Management

- Scan payer EOBs into EDMS for easy search and retrieval.

## Payment Posting

- Scan checks into EDMS.
- Post checks in billing system.\*

## Secondary and Tertiary Filings

- Locate original EOBs and related documentation in EDMS.
- Electronically redact as needed for submittal.
- Send documents directly from EDMS to secondary and tertiary payers.

## A/R Analysis

- Analyze accounts by referring to source documents in EDMS.

## Payment

- Transmit collection reports from EDMS to provider.

**Please note:**

\* Occurs outside EDMS.

# EOB Management

Even though more and more payers are delivering electronic EOBs, the significant time and effort involved with managing remaining paper EOBs makes this an area where document management technology can produce substantial and measurable time savings and efficiency improvements.

The ability of a document management system to extract all of the data from the scanned EOBs means that an individual transaction can be found on the basis of any known or partially known data, including patient name, claim number, date of service, etc. **The time to search and retrieve a particular EOB can be conservatively condensed from 10 minutes to 15 seconds—forty times faster.**

In addition, integration with the billing application allows users to query the repository directly by reference to specific fields in the application screen. And having found an EOB transaction, the user can electronically redact other patient information and print, fax or e-mail the redacted page.

Based on hundreds of installations and associated experience with medical billing environments throughout North America, **Laserfiche conservatively estimates that savings in EOB management efficiencies can range from \$30,000 annually in a single-facility department to \$300,000 at a third-party billing organization.**

Size of Organization	Single Facility	Multi-Facility	Third-Party Medical Billing
EOB Retrieval Time Savings	4.75 Min/Claim	4.75 Min/Claim	4.75 Min/Claim
Savings	\$30,829	\$92,488	\$308,293

# Space Efficiencies

One of the most visible benefits of digital document management technology is a reduced need for physical on-site and off-site storage space for paper files. Once a digital document management system has been fully implemented, filing cabinets and boxes are no longer necessary.

Organizations that have fully implemented digital document management systems can reduce their on-site storage space and instead use it for revenue-generating purposes. Laserfiche analysis has shown that realistic file space savings using equivalent rent costs can be 40 percent in the first year and 90 percent over time, primarily due to the elimination of file cabinets and other paper storage.

Digital document management systems also eliminate off-site storage expenses. **Using an average box storage cost of \$7.25 per year, a department can save \$40,000 per year, and a third-party billing environment can save \$400,000 per year.**

**This cost savings does not include the savings in retrieval time afforded by the instant access to digital records.**

<b>Size of Organization</b>	<b>Single Facility</b>	<b>Multi-Facility</b>	<b>Third-Party Medical Billing</b>
Reduction in On-Site Storage (Sq. Ft.)	600	1,200	2,400
<b>Equivalent Rent Cost Savings</b>	\$14,400	\$28,800	\$57,600
Reduction in Off-Site Storage (# of Boxes)	5,625	16,875	56,250
<b>Off-Site Storage Cost Savings</b>	\$40,781	\$122,344	\$407,813

# Client Relationship Management and Administration Efficiencies

There are also non-quantifiable benefits to an efficient search and retrieval process on provider and patient service. How valuable is it to be able to answer a question immediately, without having to hang up, retrieve the information and then call the client back, only to find yourself caught in a never-ending game of phone tag?

Digital document management offers many improvements in client service that are not immediately quantifiable:

- Answer client questions immediately, which reduces phone time for staff.
- Instantaneously share documents with colleagues and staff, whether they are in the office or at another location.
- Have client information available for immediate access, even while an other staff member is viewing it—something which is impossible with paper documents.

In addition, many billing organizations find that their billing application does not provide reporting flexibility and prefer to use their document management system's template fields as the reporting database. Not only can they report on the status of claims-in-process, but, by exporting claim charges back to the document management templates, all pertinent information is immediately available for reporting. Customized reports can be generated using tools like Microsoft® Access® or Crystal Reports®.

An EDMS can also simplify measurement of processing productivity. The same audit reporting tools that monitor compliance with security regulations also provide essential management information such as claims processed per employee or work group, along with the time spent per claim.

## Conclusion

Clearly, there are procedural and administrative changes that must take place when implementing an electronic document management solution. The labor-intensive printing, sorting and compiling function is replaced with a centralized batch scanning process, but recent bulk-scanning enhancements to digital document management software, including automatic categorizing and filing, has dramatically reduced the time associated with this task. Staff must also be willing to transition from working with paper and to use digital annotation tools.

There is little doubt that the solution offers a significant return on investment, and there are a number of reasons for billing organizations to consider implementing a document management solution, including competitive advantage, increased customer satisfaction, improved collection cycles and dramatic cost reduction. Effective management of the resulting scanned images and related electronic records requires a fully functional electronic document management solution that has an integrated workflow component.

This white paper has used a practical approach, focused on industry data and hundreds of real-life examples of cost and time savings, to determine the return on investment document management technology can provide to billing departments and organizations. For ultimate success, you must look for ways to automate wherever you can—and eventually retire outdated, inefficient business processes.

Shorter collection times, increased efficiency and greater business value are all within your grasp—and digital document management technology is the key.

# APPENDIX

## Projected Annual Savings from an EDM Implementation for Medical Billing Operations

Size of Organization	Single-Facility	Multi-Facility	Third-Party Medical Billing
Supplies	\$3,105	\$9,315	\$31,050
Printing	\$4,050	\$12,150	\$40,500
Incoming Shipments Eliminated	—	585	4,875
Savings	—	\$5,850	\$48,750
Shipments Eliminated To/From Coders	—	900	7,500
Savings	—	\$9,000	\$75,000
Reduction in Data Entry FTE	63%	63%	63%
Savings	\$30,140	\$90,419	\$301,395
Claim Processing Time Savings	1.50 Minutes/Claim	1.50 Minutes/Claim	1.50 Minutes/Claim
Savings	\$32,452	\$97,356	\$324,519
EOB Retrieval Time Savings	4.75 Minutes/Claim	4.75 Minutes/Claim	4.75 Minutes/Claim
Savings	\$30,829	\$92,488	\$308,293
Reduction in On-Site Storage (Square Feet)	600	1,200	2,400
Savings (Equivalent Rent)	\$14,400	\$28,800	\$57,600
Reduction in Off-Site Storage (# of Boxes)	5,625	16,875	56,250
Savings	\$40,781	\$122,344	\$407,813