

Beth Israel Deaconess Medical Center



Keeping Pace with the Challenges of Paperless Medical Records

CHALLENGE

Beth Israel Deaconess Medical Center (BIDMC) of Boston, MA is a large healthcare institution and teaching affiliate of Harvard Medical School serving nearly a quarter million patients a year. According to CIO Dr. John Halamka, “Beth Israel Deaconess Medical Center is committed to paperless medical records and is one of the most wired hospitals in the country, yet only 40% of all clinical information is recorded electronically. Inpatient notes are still handwritten, over 400 paper forms are used in the process of care, and many documents appear only in the paper chart. The five year goal is to achieve an 85% electronic medical record.”

Dr. Halamka noted, “One of the greatest challenges is capturing text information in electronic form. Dictation is highly effective because clinicians can dictate anywhere, at anytime, using a multitude of devices. However, transcription can be expensive and slow.”

Three of the hospital’s divisions — its primary care center Healthcare Associates (HCA), its Specialty Clinics, and its Radiology Department — experienced several problem areas with manual transcription workflows, including high costs of medical transcription services, slow and inconsistent turnaround times, often 4-6 days, and unreliable report distribution and printing.

SOLUTION

In 2002, BIDMC selected the EditScript™ solution for Computer Aided Medical Transcription from eScripton. With EditScript, intelligent speech recognition turns clinicians’ dictations into formatted draft documents that medical transcriptionists (MTs) quickly review and edit. Unlike other speech recognition products, the EditScript solution was designed not only to provide high quality content, but also to format documents according to an institution’s standards, thereby establishing document consistency and increasing MTs’ productivity, allowing them to focus on critical editing tasks.

Today at BIDMC, more than 21 million lines of transcription per year are being produced using the EditScript solution. The organization has successfully reduced turnaround time and achieved cost savings of more than \$2 million. Dictations from more than 800 clinicians have been processed through the system and 95% of the dictation volume is currently going through the speech recognizer to produce first drafts for editing. No clinician training was required, and clinicians had minimal change to their workflows when the new system was installed.

Prior to switching to EditScript, Transcription Managers at BIDMC spent a great deal of time managing multiple transcription resources. With the EditScript solution, BIDMC was able to streamline this process. According to Sheila Linehan, IT Application Analyst and Project Lead at BIDMC, “We found that standardizing our outsourced transcription to two vendors through competitive bidding would lower our costs, while helping us better monitor the transcription companies.” An in-house Radiology MT group remained in place.

RESULTS

“eScripton delivers a cost effective, technologically sound product. It reduced our cost of transcription and was easy to rollout and integrate into our existing IT and medical records infrastructure.”

— Dr. John D. Halamka, CIO

“Our clinicians are very satisfied with the turnaround time and impressed that their dictation/transcription workflow did not need to change.”

— Sheila Linehan, IT Application Analyst and Project Lead

Today at Beth Israel Deaconess Medical Center:

- The organization has achieved cost savings of over \$2 million.
- Turnaround time in the primary care center has been reduced by 90%, from 5 days to 12 hours; radiology reports are delivered within 30 minutes.
- Report distribution is seamless and efficient through integration with an electronic medical record.
- The organization streamlined its monitoring and management of transcription processes and costs, and reduced the number of MTSO vendors.
- Transcription productivity has doubled and in some cases tripled.
- Clinicians continue to follow the same dictation workflow, without training or interruption.
- The consistency of the reports produced through Computer Aided Medical Transcription helps provide a valuable electronic record which replaces paper.

Report distribution had become an unreliable process for the groups at BIDMC. Through the use of the EditScript solution, report distribution is now seamless through integration with a Radiology Information System report writer, and an existing Online Medical Record in the specialty clinics.

At BIDMC, intelligent speech recognition produces drafts according to the organization's formatting standards, including:

- Full support for the JCAHO "safety first" text expansion standards: "once daily" instead of "q.d." and "5 g" instead of "5.0 g"
- For privacy reasons, eliminating patients' last names in the drafts: using Mr.?? instead of Mr. Smith
- Depicting diabetes types as Arabic numerals: "type 2 diabetes mellitus," yet formatting heart-murmur grades with Roman numerals: "grade II/VI murmur"

In addition to increasing productivity, consistent formatting greatly simplifies searching for information and extracting data from transcribed reports, such as with natural language processing (NLP). Since the change to EditScript, consistency has improved in both the headings and the body of documents produced through speech recognition.

The BIDMC implementation followed a successful process, which helped drive the excellent results the organization continues to achieve. In collaboration with an installation team at eScripton, an IT project team at BIDMC handled responsibilities of Project Management, System Management and User Support, and worked closely with the medical records staff.

TECHNOLOGY

The technology at the heart of the EditScript solution is called Computer Aided Medical Transcription (CA-MT), an approach pioneered by eScripton to focus exclusively on improving productivity of medical transcription for large healthcare organizations. Unlike competitive products that rely on general-purpose, real-time speech recognition engines, CA-MT technology incorporates three integrated components that deliver productivity gains by automating the production of highly accurate first draft medical documents and speeding the editing process for MTs.

- **Converting Medical Dictation to Text:** Powerful speech processing technology converts spoken words to written text using models developed solely from the medical transcription environment. The speech processor also delivers high quality first drafts by employing techniques that take much more contextual information into account than is possible with real-time technologies.
- **Interpretation and Formatting:** CA-MT interprets dictations in order to transcribe what a clinician intends to be in a document and not necessarily what he or she has said. When a clinician dictates "H P I" for instance, what he or she means is History of Present Illness. When a clinician says "next" the reference may be to 3 in a numbered list. Punctuation is automatically added, even when not spoken. Further, the technology formats transcribed reports in the style set up and approved by each healthcare organization.
- **User Interface for MTs:** Client software is designed to make the editing process as fast and efficient as possible. Shortcut keystrokes, templates, audio speed controls, patent-pending dual cursors and other features help MTs edit draft documents faster than if they type them from scratch. User-friendly management tools for supervisors are also designed to maintain a streamlined process and meet clinicians' needs.

The complete EditScript solution features: Voice Capture, Speech Processing, Transcriptionist Tools, and Document Management and Distribution.

CONTACT US

Let eScripton provide a free consultation on how we can help your healthcare organization streamline medical transcription.

Call 781-455-8900 or visit us on the web at www.eScripton.com.



The Leader in Computer Aided
Medical Transcription

eScripton, Inc. is the pioneer and leader in Computer Aided Medical Transcription. The company's patent-pending solution, known as EditScript, is based on the simple premise that it is faster to edit than to type. With its solution deployed at large healthcare organizations throughout the United States, eScripton is helping streamline processes, speed turnaround time, and save costs of medical transcription, without interfering with clinician workflow.

