

Measuring Quality Against the Bottom Line

Strategies for cost effective clinical documentation



Health Information Management (HIM) professionals are constantly challenged to improve results while simultaneously cutting expenses from their clinical documentation process. Given the expanding range of workflow options offered in today's marketplace, it can be difficult to gauge the risks and rewards of competing solutions before making a substantial investment.

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Ten years ago traditional manual dictation/transcription was by far the predominant method used to create clinical documentation and most quality. Speech recognition was just starting to take hold while so called "point and click" electronic health record EHR systems, which generate documents based on clinician selected diagnosis and procedure codes, hadn't been introduced yet.

Today's marketplace options for creating clinical documents lean heavily towards technology-based solutions and away from labour-intensive efforts, whether managed in-house or outsourced. It could be counterproductive to suggest derailing the current migration towards technology-based solutions. Market driven technology advances will eventually deliver improved efficiencies and lower

total solution costs. The question is, however, which of today's new technology-based solutions are truly ready for prime time and capable of supporting quality management efforts throughout the entire clinical documentation process?

No matter how sophisticated the technology, quality doesn't just happen. Looking past the sales pitches and promises or the understandable aversion to dramatic change, we need to identify the most cost-effective method to optimize quality and TAT in today's marketplace. To that end, let's explore the quality implications of competing process management options available in today's marketplace, from the perspectives of the physicians who create the documents, to the

supporting clinicians, coders and HIM professionals who must rely on them.

Over the past few years efforts by various North American industry associations established standards for measuring cost, quality and turn-around time to help make competing vendor alternatives easier to compare. Prior to these standards being established it was almost impossible to find any two organizations that calculated their document cost, quality and turnaround times (TAT) the same way. Now, as vendors are promoting a major shift in the mix of labour and technology, these same measurement standards can be used to gauge the strength, weakness, opportunities and threats of the competing workflow alternatives.

| TERRA NOVA | STRENGTH | WEAKNESS | OPPORTUNITY | THREAT |
|----------------------------------|--|--|--|--|
| Traditional Manual Transcription | Preferred method by physicians, established quality and workflow management methods. | Expensive compared to automated alternatives, aging workforce with high benefit costs. | Cheaper to outsource, Attractive rates if labour also uses speech rec. | Front-end speech and point and click systems drastically reduce traditional labour costs. |
| Front-end Speech Recognition | Eliminates traditional transcription labour and TAT issues. Cheapest technology option. | Unpopular with docs due to extra time required to document. Big increase in quality issues. | Less pushback from younger physicians. Workflow integration options improving. | More time to document means less time with patients and/or fewer patients actually seen. |
| Back-end Speech Recognition | No changes to dictator habits. Can drop cost & keep traditional quality, workflow issues intact. | Some (not all) vendors charge high upfront and/or per-user fees. Editing still required. | Can lower total process costs for both in-house and outsourced labour. | Fees & need for all volume to go through engine can eliminate any savings. |
| Point and Click Code Systems | Eliminates most MT & coding labour and TAT issues. Report content consistency increases. | Expensive and cumbersome to install. Output is complex & impersonal with major error issues. | Automated process can prompt for new report content requirements. | Same time and patient volume issues as front-end speech recognition; less time with patients and/or fewer patients seen. |
| Natural Language Understanding | Delivers point and click system type benefits for coding and quality review for much less. | Fast evolving technology that is now more of an aid to manual processes than a replacement. | Applicable as an add-on to manual as well as speech recognized workflows. | Presently more promise than performance with many vendors. Pricing schemes vary greatly. |

Traditional Transcription

Despite the emergence of new technology and the remaining pockets of old-school hand-written notes, traditional transcription still accounts for the Up until just a few years ago, traditional dictation / transcription technology was delivered through proprietary server-based dictation systems installed at the healthcare provider's facility, supported by dedicated stations that were hard-wired to the servers. Although such legacy systems still exist, they are rapidly disappearing in favor of open architecture Application Service Provider (ASP) offerings that, although they may be supported by on-site voice capture systems, eliminate the inherent service contracts and dedicated proprietary hard-wired work stations of earlier configurations. They also enable no-cost access to

vast majority of today's clinical documentation. Physicians in Canada create millions of clinical notes each year and these clinical notes are used as the product updates or new supporting technologies, such as back-end speech recognition and electronic signature, without the traditional per-user software licensing and implementation fees.

Although product details and user interface features differ from vendor to vendor, the cost of the systems can vary dramatically, especially when all of the add-on costs are considered. ASP options typically deliver 25-35% savings over traditional server-based solutions during the life expectancy of the server-based products if you can avoid the traditional add-ons such as large implementation

primary source of information for reimbursement and proof of service.

fees, interface fees, annual service contracts, or per-user licensing agreements.



Front-End Speech

Front-end, real time speech recognition has been available for over a decade, and typically requires physicians to change their dictation habits and edit their own files as they dictate. This is often met with resistance by doctors who believe they are being encumbered with administrative work and affecting their ability to see more patients.

Consequently, today's front-end speech market is increasingly dominated by hybrid technology that minimizes physician editing with back-end type system learning that stores and later automatically applies edits that were made to previous speech recognized draft documents. The hybrid approach introduces a slight delay for the additional processing completed against stored edits, many physicians simply refuse to change their dictating habits or spend the time required to edit the poorer

Back-End Speech

Back-end speech recognition has become the most commonly used productivity improvement tool in the medical transcription industry since the introduction of word processors, word expanders, and report templates.

Although perceived early-on as a threat with the potential to directly replace all medical transcriptionists, it quickly became clear that back-end speech cannot overcome disorganized dictation, poor grammar, or missing or overused punctuation. By creating a draft document that is proof-read and edited by a traditional transcription workforce while listening to the recorded voice file, back-end speech presents no process changes to the dictator who dictates as normal before receiving an edited document that is ready for review and signature.

In addition to onsite server-based configurations versus ASP thin-client options, the biggest cost concern for back-end speech options may be how

Point-and-Click Electronic Health Record EHR Systems

So called "point-and-click" EHR systems generate medical reports with pre-defined template paragraphs for diagnosis and procedure codes that are selected by the physician through an interactive online session. Such platforms require the physician to manually type non-procedure / diagnosis code details to complete the report or rely on supplemental dictation / transcription to be integrated with the report through sophisticated workflow schemes and platform interfaces. By having the physicians select the codes and conclude the documentation process during the time of normal dictation, the objective is to completely eliminate the costs and processing times of transcription and coding.

Such systems are now available for inpatient environments from a handful of very large technology providers and are presently being deployed almost exclusively in very large hospital groups due to the extensive client side IT and HIM configuration support requirements for overall platform costs, implementation and ongoing maintenance.

drafts generated by simple front-end products, causing them to become unused shelf-ware.

Pure front-end work-station centric applications are relatively inexpensive and can do an acceptable job of documenting encounters for good dictators and/or physicians willing to take the time to train themselves for how the application listens while doing their own editing. Their stand-alone approach, however, inherently limits the meaningful use of the documents downstream without additional applications or interfaces, such as the automated import of ADT data to ensure proper patient selection and/or subsequent distribution into more sophisticated report databases. Enabling such seamless downstream use for a reasonable price is where these types of solutions typically fail dramatically in today's marketplace.

different vendors contractually manage the volume that they direct through their speech engines. Some vendors require all volume to go through, regardless of how poor the expected draft documents might be. Others allow bad dictators who will never generate acceptable drafts to be handled manually. Most service vendors agree that if the draft is not at least 95% accurate, it's faster and less expensive for the document to be generated manually. A document with 90 percent to 95 percent accuracy requires extensive editing.

With the exception of radiology volume, which qualifies higher percentages due to the inherent short reports, limited vocabulary, and controlled dictating environments, even the best technology vendors are happy if 60-80% of the volume qualify above the 95% level. That means, even in an ideal setting 20-40% will be cheaper to process manually.

Speech engines are not expected to produce perfect drafts, so it is essential that the generated

Vendors promote the expected downstream advantages of the consistent data captured for each encounter, while opponents argue that since documents use exactly the same content when a particular diagnosis or procedure is selected, the resulting analytics will be considerably less useful for personalized care than similar analysis completed on reports generated through free form physician narrative. Vendors counter with the physician's ability to insert text manually or use supplemental dictation to complete an equivalently rich patient health story.

Unfortunately, many of the platforms have character limits to the data entry fields, forcing physicians who do enter details to be brief, most often less than 1000 characters, instead of complete thoughts. In practice it's quite often found that physicians actually tend to circumvent the time it takes to do the job completely, leaving out notable details to minimize their documenting time. Some studies suggest comprehensive documentation with such platforms can add between 60 to 90 minutes per day to a physician's

Front-end speech is universally promoted as a means to eliminate transcription labour costs. On the flip side, it adds an editing burden for the dictators. Many physicians protest having to correct something on most dictations, slowing them down and leave them feeling annoyed that they have to edit things instead of moving on to the next dictation. Many still consider the traditional dictation-transcription process the fastest and most productive option.

Many Health Information Management (HIM) departments see an improvement over a couple of years after implementation, however the process to analyze charts is slower because they must critically read the documentation in order to catch errors introduced by the speech engine and not corrected by the physicians.

documents be proof read by experienced transcription professionals while listening to the voice files. Since the engines are programmed to produce grammatically accurate drafts with no blanks, such 100% sight and sound editing ensures that the documents presented for signature reflect what was actually dictated, versus what sounds logical and reads well based on the engines' interpretation of the voice file. Failure to complete 100% sight and sound editing will inevitably push errors downstream. When all labour and technology costs are considered, full process cost savings of 20-30% are reasonable expectations.

It is worth noting that the industry has many examples where labour savings of even 50% were more than outweighed by higher technology expenses resulting in a net gain for total process costs, so it is critical to review all potential add-on costs.

workload (which almost always results in fewer patients seen per day versus longer physician hours). The real question is whether this technology is more effective at managing workflow with fewer total personnel or supporting ongoing patient care. Obviously, that answer is largely dependent on the expected quality of input from the physicians.

Expecting physicians to document patient visits with the click of a mouse is a major and unwelcome process shift that can lead to risky shortcuts, as noted above. From a pragmatic perspective, errors are always easier to fix while in process rather than after the fact. By automating the entire process, errors can only be identified after the damage is done. In most circumstances, simple physician data entry errors become drawn out IT and/or billing issues rather than a normal daily component of HIM workflow management

Natural Language Understanding

Natural Language Understanding NLU (also referred to as Natural Language Processing NLP) is a software application that scans reports to identify, tag and index designated words and/or phrases within a given set of documents. Early uses of the technology were primarily directed towards tagging the terms that trigger diagnosis and procedure code for Computer Assisted Coding (CAC) applications, while more recent efforts have expanded the technology scope to address quality assessment initiatives.

Seen by many as an alternative path to the automated coding and comprehensive statistical analysis capabilities touted by point and click systems, NLU delivers the same downstream

advantages while preserving the richness of the traditional physician free-form narratives.

Typically offered through a pay-as-you-go ASP service, NLU processing is available at a lower cost compared to point and click systems and requires almost no IT or HIM support after a rather simple implementation. Consequently, although considered by many to still be in the early growth stages of product maturity and market use, NLU is arguably the fastest growing technology in the clinical documentation sector.

Since NLU is applied to completed reports, it requires absolutely no process changes for physicians, transcriptionists or medical editors. Coders benefit from a pre-populated coding

worksheet when applied as part of a CAC application and quality analysts are provided with a tremendous productivity improvement tool as some products can automatically apply if/then queries.

Like all of the options covered in this article, no technology is perfect. Parallel to speech recognition, NLU can dramatically improve the efficiency and cost effectiveness of coding and quality analytics efforts, especially if the results are used to auto-populate the point and click EHR platforms based off the content of the dictated narrative. In fact, NLP of dictated narrative can deliver all the benefits of individualized patient care detail with the downstream analytics of the structured data EHR efforts, resulting in the best of both worlds.

Summary

In a market driven by technology concerns over labour considerations, it's important to remember no technology solution can stand on its own. Regardless of how slick the promotional materials or demos may be, people need to interact with it on a daily basis to make it work and the old axiom of garbage in, garbage out holds true.

Choosing the best approach for your organization may very well be driven by the size of your organization and the expected return on

investment. In the end, however, it has to come down to the business of healthcare. How can we optimize the total cost of technology and labour to best care for patients. New technologies will always try to automate labour intense processes, but in healthcare, patient care and total solution costs demand quality results that cannot be compromised while the technology matures. Cutting through the marketing noise and making the best informed decisions for hospital operations

based on today's realities will be in the best interest of patient care.



About the author

Maria French is the President and CEO of Terra Nova. She is a past Executive Committee Director of the Clinical Documentation Industry Association (CDIA), an international trade association based in Modesto, California.

Terra Nova Transcription, headquartered in St. John's, Newfoundland, with US offices in Tampa, Florida, is an industry leader in clinical documentation solutions. As one of the largest service providers in Canada, Terra Nova delivers services that improve the clinical documentation process, from document accuracy to improved turnaround time of completed records.

To learn more about how Terra Nova can help improve your clinical documentation process, increase clinician satisfaction, and raise the level of care, please call 888-600-4178 or visit us at www.terranovatrans.com.