BEST PRACTICES
HEALTHCARE DOCUMENTATION
QUALITY ASSESSMENT AND MANAGEMENT

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TABLE OF CONTENTS

1. Executive Summary ........................................................................................................ 1
2. Introduction to Quality Assessment and Quality Management in Healthcare Documentation .................................................. 3
3. Documentation Originators ............................................................................................... 6
   A. Alternative Originator Methods .............................................................................. 6
      1. Speech Recognition, Handwriting Recognition, Structured Text, Interactive Direct Entry, Natural and Intelligent Language Processing, Software Generation .................................................. 6
   B. Dictation/Transcription Originator Methods ...................................................... 7
      1. Dictation Data Capture .................................................................................... 7
         a. Dictator ........................................................................................................ 7
         b. Audio and Handwriting ............................................................................. 8
         c. Turnaround Time ....................................................................................... 8
         d. Demographics ............................................................................................ 9
         e. Diversity of Content .................................................................................. 9
         f. Facility Specification Sheets .................................................................... 10
      2. Transcription Data Capture ............................................................................... 11
         a. Transcriptionist .......................................................................................... 11
         b. Quality Editor ............................................................................................ 12
         c. Credentialing .............................................................................................. 12
         d. Quality Manager ....................................................................................... 13
         e. Resources .................................................................................................... 13
         f. Quality Enhancing Software .................................................................... 13
4. Assessment Policies and Procedures ............................................................................. 15
   A. Overview ............................................................................................................... 15
   B. Concurrent Review ................................................................................................. 17
      1. Flagged Documents ....................................................................................... 17
   C. Retrospective Review ......................................................................................... 18
   D. Originator Assessment ......................................................................................... 18
   E. Feedback ............................................................................................................... 18
5. Scoring and Sampling .................................................................................................. 20
   A. Method A for QA Scoring: Error Value/Volume ................................................. 22
      1. Error Categories and Values ........................................................................ 24
      2. Methodology ................................................................................................. 24
      3. Example 1 ..................................................................................................... 25
      4. Example 2 ..................................................................................................... 25
      5. Sampling ....................................................................................................... 25
      6. Sampling Example ........................................................................................ 27
   B. Method B for QA Scoring: Error Value from 100 ............................................... 29
      1. Error Categories and Values ...................................................................... 31
      2. Methodology ................................................................................................. 31
3. Example 1.................................................................................. 32
4. Example 2.................................................................................. 32
5. Sampling.................................................................................... 32
6. Sampling Example ................................................................. 33
C. Method C for QA Scoring: Pass/Fail....................................... 35
   1. The Pass/Fail Criteria.......................................................... 35
   2. Sampling............................................................................. 35
   3. Example.............................................................................. 36
V. Recommendations..................................................................... 37
   A. Transcription Dept / Outsourced Vendor Recommendations..... 37
   B. Industry Recommendations.................................................. 39
VI. References ............................................................................... 41
VII. Appendix A: AHDI Medical Transcriptionist Job Descriptions:
     Results of a Benchmarking Analysis of MT Professional Levels..... 42
VIII. Appendix B: AHDI Medical Transcriptionist Editor Job Description 45
IX. Appendix C: AHDI Quality Assessment Manager Job Description.. 47
XV. Appendix D: QA Error Descriptions......................................... 49
XVI. Acknowledgements .................................................................. 56
EXECUTIVE SUMMARY

Quality assessment and quality management of healthcare documentation has assumed great importance in today’s healthcare market. The quality of the data directly affects the patient by impacting medical decisions and contributing to continuity of current and future care, as well as affecting provider reimbursement. Patient safety and rising healthcare costs drive renewed efforts by health information managers, accreditation bodies, and healthcare compliance agencies to inspect records for document quality.

Patient encounter information is currently captured through all of the following mechanisms: (1) dictation with subsequent transcription; (2) speech recognition with subsequent editing; (3) handwriting recognition; (4) structured text origination; (5) interactive direct provider input; (6) natural or intelligent language processing used to generate documentation and structure; and (7) software generation of documentation through data source integration (i.e. creating discharge summaries by identifying relevant information from existing hospital-stay reports). Implementing an effective quality assessment program that includes feedback and improvement features will reap benefits for all these originators and ultimately contribute to better patient care.

This paper introduces suggested best practices for quality standards and quality assessment (QA) in originator-to-text conversion. While technology contributes to the production of medical documentation, highly-trained professionals exercising critical thinking skills and informed interpretive judgment, are best suited to ensure quality in the production of medical records.

A comprehensive quality assessment program should address each aspect of the originator-to-text process and needs to assess both narrative and structured content appropriately. The QA process should achieve: improved documentation through evaluation and optimization of process and workflow; identification and correction of errors and inadequacies within the documentation; improvement in the skills of the originator and documentation specialist through evaluation of error patterns and continuing educational efforts; and, provision of statistical evidence.

Each documentation department requires an adequate QA budget for personnel, resources, software, and continuing education. Three percent of the total department budget is offered as a suggested starting point. In each facility quality assessment guidelines and a style guide, policies, procedures and training for all documentation originators and transcription staff, facility specifications and databases of pertinent and facility-specific information need to be readily available. Workflow procedures in the originator-to-text process need to be practical to achieve
accuracy and appropriate turnaround time. Workflow procedures should allow for routine assessment of an appropriate portion of random reports for MTs and originators who are not under 100% review. A feedback mechanism to originators and MTs should be education-based. Improvements can be tracked following intervention. Computation methods require consistency and objectivity among the editing staff. In particular development of critical thinking skills, continuing education in the definition and application of the quality standards, and successful mentoring skills need to be acknowledged and encouraged. Errors must be identified within their context. For adequate analysis, at least two perspectives are to be addressed statistically in documentation quality assessment for the sake of administrative quality overview:

1) QA score for the originator and MT. This is a process of identifying defects.
2) QA score for the document. (Department scores are derived from these.) This is a process of identifying defective documents.

A choice of three scoring formulae is recommended based on department needs. 
1) QA Scoring: Error Value/Volume. These are scores based on error values correlated to the total line counts.
2) QA Scoring: Error Value from 100 by Document. These are scores based on error values subtracted from 100 for each document, regardless of the size of the document.
3) QA Scoring: Pass/Fail. A pass/fail based on the number of errors (recommended for department scoring only).

Also recommended are appropriate sampling techniques that take into consideration the practical implications of the labor involved. In any contractual arrangements involving quality requirements, transparency of the formulae and the sampling standards is essential. A mutual understanding of the effects that sample sizing has on the statistical margin of error, for example, needs to be discussed openly and agreed upon.

Industry studies are recommended for benchmarking and to determine effective educational and interventional techniques to improve quality. Vendors are encouraged to work closely with the organizations and users subscribing to the best practices recommended herein to improve their products’ results, measuring them to these statistical standards.
Quality Assessment and Quality Management in Healthcare Documentation

The importance of accuracy in medical documentation cannot be overstated. The quality of the data directly affects the patient by impacting medical decisions and contributing to continuity of current and future care. Accuracy and completeness of medical documentation also affects provider reimbursement, as the documents derived from captured health data are used to support the coding and billing process. As referenced by Donna Wilson in the Journal of AHIMA, medical research, biosurveillance, decision support, consumer use, and health policy development all depend on the quality of healthcare documentation. Patient safety and rising healthcare costs drive renewed efforts by health information managers, accreditation bodies, and healthcare compliance agencies to inspect records for document quality.

At its roots quality could be noted as the measure of excellence comparing consumer-defined accuracy expectations against provider-delivered results as measured by a common and mutually agreeable set of metrics or scoring system. The American Society for Testing and Materials (ASTM) has referenced quality and integrity in healthcare documentation as the clear, consistent, accurate, timely, and complete documentation of a patient’s care as derived from dictated or other technologically captured communication.

AHIMA builds the case for quality in its “Quality Healthcare Data and Information” Position Statement of December 2007. “Improving the quality of data, information, and knowledge in the U.S. healthcare system is paramount as we transition from paper to electronic health records. Many errors and adverse incidents in healthcare occur as a result of poor data and information. In addition to threatening patient safety, poor data quality increases healthcare costs and inhibits health information exchange, research, and performance measurement initiatives.”

Patient mobility, patient care choices based on merged institutions, scientific research needs, data mining, government oversight, and the emergence of the electronic health record are all contributing factors to the emerging demand that quality health data capture and documentation be ensured.

Recent evolutions in health information technology have given rise to new challenges in delivering this level of quality. Speech recognition is an example given in the AHDI Dictation Best Practices. “If the human ear is unable to discern the words, it is unreasonable to expect that a voice recognition engine could perform any better. In addition, recognition engines cannot ‘make decisions’ such as separating side conversations from actual dictation, follow special instructions given by the dictator, or catch discrepancies such as ‘right arm’ and ‘left arm’.”
Patient encounter information is currently captured through all of the following mechanisms: (1) dictation with subsequent transcription, (2) speech recognition with subsequent editing, (3) handwriting recognition, (4) structured text origination, (5) interactive direct provider input, (6) natural or intelligent language processing used to generate documentation and structure, and (7) software generation of documentation through data source integration (i.e. creating discharge summaries by identifying relevant information from existing hospital-stay reports). Implementing an effective quality assessment program that includes feedback and improvement features will reap benefits for all originators and ultimately contribute to better patient care.

This paper introduces suggested best practices for quality standards and quality assessment (QA) in originator-to-text conversion. Reliable overviews and effective quality improvement strategies are the anticipated outcome. While technology contributes to the production of medical documentation, highly-trained professionals exercising critical thinking skills and informed interpretive judgment, are best suited to ensure quality in the production of medical records. Ultimately, it is proposed here that capturing, evaluating, and accurately interpreting clinical data requires the elements of Bloom’s Taxonomy: information synthesis, evaluation, reconstructive thinking, analysis, as well as the informed perception a documentation professional offers. Thus, while technology can help facilitate this task, it cannot replace trained professionals.

Quality influencers are multi-factorial and include the software and hardware utilized, the personnel involved and their respective skill levels, the diversity and complexity of the work, the facilitation or restriction of work flow, the global distribution of work, the impact of turnaround time (TAT), and the challenges and pressures associated with cost. A comprehensive quality assessment program should address each aspect of the originator-to-text process and needs to assess both narrative and structured content appropriately.

Quality can best be achieved through a planned set of actions designed to provide the end user with the product they expect to receive. Quality assessment is a review process whose goal is to ensure patient-care documentation is clear, consistent, accurate, complete, timely, and satisfies stated or implied requirements for documentation of patient care.

The QA process should achieve:
- improved documentation through evaluation and optimization of process and workflow.
- identification and correction of errors and inadequacies within the documentation.
• improvement in the skills of the originator and documentation specialist through evaluation of error patterns and continuing educational efforts.
• provision of statistical evidence.

QA in healthcare documentation should emphasize the assessment and improvement processes at the front end of the documentation process (such as when the document originator dictates or inputs to the record in alternative ways) and should not be viewed exclusively as an exercise in “filling in blanks” or flagging and tabulating errors. For a quality assessment program to be effective, it must be comprehensive, involve every step of the originator-to-text process, and incorporate quality check points at effective stages in the workflow process.8

At the present time, many quality resources are placed at a point just prior to signature in order to rectify information. Sometimes second- or third-tier input is required for difficulties encountered. Required audits are frequently done retrospectively or not at all in the case of direct provider input, thus greatly increasing risk. As more departments and the industry itself move forward with benchmarking and with further development of work flow optimization, the goal will be emphasis on the prevention of errors. Budgeting will be shifted in greater portion to the front end of work flow with education, credentialing, and utilization of quality improvement mechanisms. Donna Wilson describes this in a recent JAHIMA article. “Building measures for evaluation, benchmarking, and documentation improvement at the point of service is a critical factor. Data quality is impossible if the source document is inadequate, ambiguous, inaccurate, or incomplete... Improving source documentation involves clinical documentation improvement programs focused on the results important to patient care and data management.”19

Education will be a key factor in quality improvement success, in the forms of certification, on-the-job mentoring, and an enhanced knowledge base for all document originators and transcriptionists/editors. AHIMA has cited this need clearly in their position statement Take Action to Educate and Expand the Health Information Management Professional Workforce (June 2007).

Quality assessment should be a proactive process. Implementing an effective program will benefit all originators, will improve the effectiveness of the technologies utilized, and will ultimately contribute to better patient care. In another relevant JAHIMA article, Skye Schulte comments on the practical implications. “Realize that sometimes, especially where quality improvement and the integration of information technology are concerned, additional startup costs and growing pains are necessary to move toward long-term savings. Expectations of cost savings need to be realistic and, in some cases, cost and benefit may need to be expressed in something other than the bottom line.”17
ALTERNATIVE ORIGINATOR METHODS

Speech Recognition, Handwriting Recognition, Structured Text, Interactive Direct Entry, Natural and Intelligent Language Processing, Software Generation

Non-transcribed documentation is generated using a variety of technologies. Technology-generated documentation must be judged by the same criteria and using the same statistical methods for scoring and sampling that are recommended within this document for human originators. Particular care must be taken to track and remedy critical and major errors as defined. Vendors and developers must be cognizant of the effects these errors, as well as minor errors, have on patient safety and data integrity. These alternative data capture methods are not immune from scrutiny and need to meet the same high standards required of transcribed documentation. Assessment Methods B and C described herein can be utilized to evaluate the quality of the document which result from these methods.

It is recommended that vendors work closely with their client organizations and technology adopters in subscribing to the best practices recommended herein to ensure (and in some instances improve) their marketed product deliverables, measuring them to these statistical standards. The editing of healthcare documentation goes beyond comparisons between what is said and what is produced. Accuracy must be evaluated in the context of the document itself, meaning that the healthcare document analyst must employ a range of intellectual and analytical skills in considering evidence, context, and relevant criteria for making a judgment. Thus the critical thinking skills of a medical transcriptionist/editor are required to evaluate whether something is in fact an “error” in order to ensure the integrity of the content. Originators are encouraged to develop improvement techniques based on the specific results of the quality assessment and general professional experience. Such recommendations then can form the basis for further improvements in partnership with vendors, internal organizational IT staff, and the technological products in use or development. Finally, statistical trending of results following these types of interventions is encouraged to create an impact assessment of these emergent approaches.
DICHTATION/TRANSCRIPTION ORIGINATOR METHODS

Dictation Data Capture

The Dictator
Voice-to-text documentation begins with the creation of a sound file by the healthcare provider, who may be referred to as the dictator, originator, or author. The dictator’s verbal communication skills have a significant impact on the quality of the transcribed data. Dictation skills are primarily impacted by the dictator’s natural ability to organize and articulate his/her thoughts. Medical word misuse, incorrect or incomplete information, incorrect verbiage, and poor grammar can also create ambiguity in the final report. In addition, rapid speech, heavy accents, poor articulation, low speech volume, and a raspy, hoarse or especially deep voice can compromise the transcriptionist’s ability to interpret the audio. Dictators who speak English as a second language (ESL) also pose significant challenges for the transcription staff, as they often present with many of the above-mentioned communication problems. In the face of extreme fatigue, even the most articulate and organized author can dictate incoherent or unintelligible content with a high risk for errors and misinterpretation.

In an AHDI Quality Assessment Study 220 records were reviewed and 38 critical flaws were detected. Of those critical flaws affecting patient safety, 53% were caused by the dictator’s medical word misuse. Furthermore, throughout this study, the dictator’s speed and poor articulation were cited as being the most frequent causes of problematic dictation.2

Because of the impact dictation flaws have on the ability to properly transcribe the dictation, there can be patient safety risks, negative financial impact, negative impact to the document’s integrity, and even risk management issues. The ASTM Standard for Quality Assurance gives guidelines in this area. “Authors should be educated and oriented in creating a timely, accurate, and comprehensible dictated report, with emphasis on avoiding the use or overuse of abbreviations, acronyms, back-formations, coined terms, jargon, profanity, short forms, and slang.”12 Quality assessment procedures should include a feedback mechanism that encourages improvement in dictators’ communication skills. “Policies should be developed to address difficult or problematic authors and how to work with them to ensure the accuracy and completeness of their reports.”13 For more information on instructing authors in effective dictation practices, see the Dictation Best Practices Toolkit 2006 published by AHDI.
Audio and Handwriting
The recording device and the environment where dictation is recorded should be evaluated on a regular basis. Cassette tapes should be replaced regularly, and dictators using any type of hand-held device should keep fresh batteries close at hand, or be certain to have charged the device appropriately. Old or worn wiring in telephones or other hard-wired devices should be replaced, as static and reverberation can interfere tremendously with interpretation of the audio file. Software updates should be current in digital recording devices.

While dictating, background noises should be monitored and avoided, including concurrent conversations, radios, televisions, public address speakers, sirens, and equipment such as cast saws and beepers. Activities such as eating, chewing gum, and driving a car while dictating should also be discouraged. Features of everyday face-to-face (such as those mentioned above) talk can significantly impede the ability of the transcriptionist to hear what is being said electronically. What might seem like a minor disturbance can become a major distraction when the voice file is being transcribed. Cell phones also pose problems due to dropped calls, interrupted signals, poor sound quality, and lack of security.

In a memo to the medical staff at Caldwell Memorial Hospital, Geoffrey Burbridge, MD, Chairperson, Medical Record Committee writes:

“Another patient safety goal focuses on legibility. Legibility of handwriting has long been identified as a problem. With increases in technology, inaudible dictation has fallen into this same category. Illegible handwriting and inaudible dictation both are records of patient care/findings that are incomprehensible by others. Poor dictation can result in the omission of very important words such as “no” or “non”, as in “there is (no) malignancy identified”, or large amounts of phrases and or words that cannot be transcribed due to the dictation being inaudible, garbled, or loud background sounds over-riding the voice.”

Turnaround Time
The Dictation Best Practices Toolkit also gives an overview of the effect poor dictation can have on Turnaround Time (TAT). The usability of healthcare documentation is not only predicated on its accuracy; timeliness and availability are also paramount. Timeliness here refers to both the time taken to create the voice file and the time taken to create the document. Time delay between the care encounter and the dictation session can have a direct impact on the completeness and accuracy of the dictation, particularly when the author is challenged to recall all pertinent facts. Once a report has been dictated, the time required to complete the dictation and return the report to the patient’s record, the turnaround time (TAT), is
also of concern. The continuing effort to reduce TAT is seen in all healthcare facilities, yet problematic dictation can consume up to 33% more resources in labor-related time. Studies in various transcription departments have generated statistics that reveal serious implications to TAT due to dictators. Poor dictation practices can double and triple the time spent by medical transcriptionists (MTs) and quality editors in a combined effort to resolve dictation problems. Thus, TAT is not solely the application of the transcription process; it is greatly impacted by the quality of dictation and the practices of the dictator.

**Demographics**

Accurate identifying information is critical to correlating the report to the appropriate patient record in a timely manner. The MT should never assume that the patient identifier was properly keyed into the dictation equipment, and any pre-populated demographic information should be confirmed by the dictator’s verbal identification of the patient. In order words, MTs should treat all information in the pre-populated information with the same critical eye toward potential errors that is applied to the body of the report. In addition to stating the patient’s name, the dictator should give at least one other patient identifier, such as a medical record number, encounter number, or date of birth. Instructions should be provided to the dictator on the document identification process and proper use of dictation equipment. Since many providers must use more than one dictation system with different prompts and key commands, quick-reference materials, such as pocket cards, help promote good use of applications.

**Diversity of Content**

The diversity and difficulty of the work can influence the quality of transcribed information created by a transcription department or outsourcing service. A transcription organization that services a wide range of healthcare practitioners will face a commensurate number of challenges in maintaining excellent quality across all medical specialties. A medical specialty in this context is defined as a distinct field of study such as cardiology, orthopedics, gynecology or psychology. Not all specialties are equally challenging to transcribe, and proficiency in certain specialties does not automatically translate into proficiency in other specialties. Highly technical specialties such as neurology utilize a distinctive vocabulary set that differs from the broader vocabulary set of specialties such as internal medicine and family practice. Operative reports stand apart from other report types as they require familiarity with both common and brand names of surgical equipment and supplies. Radiology has minimal overlap with the clinical disciplines. Typically, a seasoned radiology transcriptionist may excel in the area of anatomy but will have very little exposure to other distinctive vocabulary sets.
Facility Specification Sheets

Facility specification sheets can help tremendously in the effort to train and assist a transcriptionist in acclimating to a new dictator(s). Information to be gathered and maintained should include names, credentials, physical addresses, e-mail addresses, and fax numbers for referring physicians and other healthcare providers such as nurse practitioners, therapists, technicians, and assistants as well as for local hospitals, clinics, imaging centers, ambulatory surgery centers, nearby schools, and major businesses and industries. Other helpful information includes a list of regional slang, jargon, and abbreviations commonly used by the dictators within that facility. Dictators in ambulatory care settings, especially those in private or group practice, often have preferences or instructions that are to be assumed, and these instructions should also be documented. Examples of assumptions include the creation of cover letters, courtesy copies, and enclosures.

Keeping these specification sheets up-to-date and readily accessible allows the MT to locate information quickly and efficiently, improving productivity and turnaround time. Since much of the information maintained on these sheets is not available through any other resource, the MT will leave fewer blanks and spend less time searching for hard-to-find information. This supportive tool can also diminish the burden on the QA staff and reduce QA costs.

Maintaining an archive of de-identified reports can also aid the transcriptionist in acclimating to a new dictator. Often providers rapidly dictate their most common phrases and may slur the words to the point of incomprehension. Previous reports are invaluable in these circumstances and will save the transcriptionist immeasurable time listening and re-listening. Likewise, the QA staff will spend less time filling in blanks.
Transcription Data Capture

The Transcriptionist
(See Appendix A for AHDI’s Job Description.) The training and experience of the transcriptionist has a direct impact on the quality and TAT of the transcribed report. In building a solid foundation for quality within a department, care should be taken to screen prospective medical transcriptionists with the department’s quality standards in mind. Candidates should be selected based on a strong foundation in critical thinking skills, medical terminology, anatomy, physiology, human disease processes, pharmacology, subspecialty terminology, medical report formatting, English and medical spelling (including medications and laboratory technology), current standards of style and industry best practices, English grammar, and industry technologies. Proficiency in keyboarding, proofreading, editing, applying auditory discrimination, using technical references, and working with enabling technologies is also required. Since many departments also include editing of speech-recognized documents as part of the transcription job description, this skill also must be mastered where required.

Because the competency of transcriptionists varies widely, it is important that the transcription manager be familiar with the capabilities of the staff and assign the workload accordingly. Even after careful screening and selection of an MT, it is important to identify the actual competency level, critical thinking skills, and strengths and weaknesses of each member of the transcription team in order to ensure consistent quality and improvement.

Transcriptionists may fall into one of the following categories:

**New hire:** This category may include a trainee (intern or apprentice), an entry-level MT, or a Level 1, 2 or 3 transcriptionist (see Appendix A for job descriptions). Even experienced transcriptionists may temporarily fall into this category, as every MT needs time to acclimate to new software, new facility specifications, and new dictators.

**New MT:** This category would include interns, apprentices, entry-level MT, and minimally experienced transcriptionists. This category would include Level I transcriptionists. This may also include an experienced transcriptionist who has never worked in the assigned medical specialty. For example, an MT who has worked 10 years in an orthopedic clinic would be considered a “new MT” in an acute care setting.

**Experienced MT:** This category includes MTs with experience in the given specialty or experience in a broad range of specialties. Generally speaking, this category would include Level II and Level III transcriptionists.
The Quality Editor

(See Appendix B for AHDI’s Job Description.) The ideal quality editor is both a competent transcriptionist and an educator. The breadth of experience and expertise of the quality editor will need to exceed the skill levels of the existing staff. The editor’s educational background should include training in critical thinking skills, medical terminology, anatomy, physiology, human disease processes, pharmacology, subspecialty terminology, medical report formatting, English and medical spelling (including medications and laboratory technology), and English grammar. Editing also requires exceptional critical thinking skills, proofreading skills, keen hearing, and auditory discrimination. Editors should be adept in the use of tools and professional references that save time and create efficiency in the documentation process (including the appropriate use of internet resources); their knowledge of current standards of style and best practices in medical transcription should be of the highest level. The position of editor demands a multi-specialty background and experience, with broad knowledge and insight into the diagnostic process for each complex clinical specialty encountered at the acute-care or transcription service level.

It is of note that often within departments there is a division of quality work based on several situations: (1) Completing documents placed on hold or flagged within the transcription system; (2) Assessing the quality of concurrent documents to provide oversight of the documents, the originators, or the transcriptionists, as well as a mentoring-style feedback; and, (3) Assessing the quality of documents retrospectively to provide oversight of the documents, the documentation originators, or the transcriptionists, as well as a mentoring-style feedback. Various titles are used for these processes within the industry. The work done within these contexts is work of a professional nature. Other titles found in the industry for this position include QA Specialist or QC Specialist.

Credentialing

Credentials awarded by AHDI are excellent measures for screening applicants for transcription or editing positions. The Registered Medical Transcriptionist (RMT) credential assesses candidates for foundational knowledge in anatomy, physiology, disease processes, pharmacology, English usage, and style issues in medical transcription. The Certified Medical Transcriptionist (CMT) credential administered by AHDI tests more in-depth knowledge of medical transcription. This level II credential is an indication that the candidate has mastered acute-care-level skills in medical transcription and that he/she is engaging in ongoing professional development, as a CMT must maintain credentials by earning continuing education credits in clinical medicine, professional development, health information technologies, and medicolegal issues.
The Quality Manager

(See Appendix C for AHDI’s Job Description). Depending on the size of the medical transcription department or service, the quality manager may be a full-time position or it may be part of another management position. The quality manager and department management should adopt an appropriate budget for quality assessment. Elements of that budget should include appropriate staffing, quality review software, reference books, electronic references, internet-based resources, staff reimbursement for professional activities, and other resource and time allocations as necessary. The quality manager should direct efforts toward delivering quality documentation by establishing procedures, engaging in training, and developing resources for all involved (dictators, as appropriate, as well as transcriptionists, clerical staff, and quality staff). This individual should identify continuing education resources and make them available in order to keep transcription and quality staff updated on healthcare issues such as clinical diagnosis and treatment, medical and professional ethics, professional practice and development, technology, specific editing and proofreading skill enhancements, communication skill enhancements, ergonomics, and knowledge of risk management, documentation standards, and industry trends.

Resources

In order to accomplish their tasks well, transcriptionists and quality editors alike need the most current resource materials of the highest professional caliber, including both hard copy and web-based sources. Whether working at the facility or from home, every MT should have access to up-to-date references including dictionaries (medical and English), drug references, specialty word lists, and appropriate reference texts in anatomy, physiology, and disease processes. It is highly recommended that the required resource list include the current version of the *The Book of Style for Medical Transcription* to address issues of style and format.

It could be difficult to achieve web-based access for research purposes if the employer’s security policies preclude access while within patient documents. In those instances, it is vital that the MT be given access to current information through other technologies in order to carry out everyday activities associated with the production of quality healthcare documentation.

Quality-Enhancing Software

Software aimed at enhancing accuracy and productivity is readily available, widely compatible with current word processors and transcription platforms, and is reasonably priced. Electronic spell checkers should be installed on each transcription workstation. Electronic references in the form of dictionaries, word lists, and reference manuals are convenient reference materials that provide an array of search capabilities. The internet gives the transcriptionist access to the most current information, especially new drugs and equipment. To a certain extent, text
expansion software can also enhance accuracy by inserting accurately spelled words and phrases into a document with minimal keystrokes. The use of these quality-enhancing tools does not reduce the need for quality assessment but does improve the conditions under which the transcriptionist labors.
Assessment Policies and Procedures

OVERVIEW
Workflow design and performance measures are cornerstones to good quality. Standardized quality assessment policies and procedures create equity and transparency for originators and transcriptionists, while reducing variability in quality and providing data integrity and uniformity for the healthcare record. If the assessment results are used to inform and educate, there will be improvement, not simply a score for overseers to review. Implementation of a successful quality program must take into consideration workload, workflow, and turnaround time (TAT) required in the documentation process. Departmental standards of quality are recommended herein and should be applied consistently to all originators, originator methodologies and transcriptionists.

As standards of quality are applied to those involved in documentation, adequate time needs to be allowed to achieve the accuracy required, and these need to be communicated to each member of the documentation team. The educational culture should encourage quality improvement and create feedback and information exchange pathways that are clear and consistent. In the case of human originators, appropriate training (in both length and scope) should be provided to assist in clearly communicating the patient care encounter. In the case of medical transcriptionists, training which includes AHDI-approved certification as RMTs or CMTs is most desirable. Upon being hired, probationary periods for their transcription work will vary depending on their experience level. Newly hired or less experienced MTs (Level I, see Appendix A) will require longer timeframes to meet stated goals (from 6 weeks to 6 months depending on the diversity and difficulty of the work), whereas an experienced MT (Level II) should be expected to meet standards within 2 to 6 weeks. While department-wide standards and policies must be established, each transcriptionist should be evaluated individually in terms of actual experience, keeping in mind that single-specialty experience is not the same as multi-specialty or acute-care experience.

Merely proofreading reports is not equivalent to a quality review process, which should involve comparison of the transcript with the original input (such as voice), and always presumes review for meaning of content. Using established style guides such as the current Book of Style, as well as creating a style guide that addresses issues unique to the facility, will reduce the subjectivity of the quality review process. Citing references for all corrections will help maintain objectivity. While some degree of subjective judgment will be involved in a variety of instances, the basis for these judgments should be consistent. This requires well-developed critical-thinking skills in the editors.
Routine quality assessments should include both originator and transcription flaws and should lead to improvement in the human or technological originator and the transcriptionist through evaluation of error patterns and instructive feedback. Workflow needs to support the swift delivery of an accurate document as well as prompt and specific feedback to the originator and transcriptionist. Review of documents can take place concurrently or retrospectively. Concurrent review is performed before the document is authenticated by the author. Retrospective review occurs after the report has been authenticated and is commonly used to assess the accuracy on an ongoing basis, especially when time constraints prohibit a concurrent review.

Check points for quality assessment should be set within the workflow process. The check points of prime importance are the quality at the time of originator input, the quality at the time of transcription or edit and its review, quality at the time of final QA for completion of incomplete documents, and quality at the time of QA audit, whether concurrent or retrospective. The greatest efficiencies should be achieved on the front end of the documentation workflow process. A higher quality first draft is more likely in environments where both the provider/originator and the transcriptionist have access to data, information, and resources that will ensure accurate capture. All too often, these resources are made available only at the quality assessment stage, where significant time is spent filling in blanks and answering flagged questions that could have been avoided if either the dictator or the transcriptionist (or both) had been better resourced.

Thus, healthcare providers who use their considerable knowledge to present clear and accurate information are the first quality step. Software designed to ensure providers have superior tools are part of that process. Transcriptionists or editors who are accredited and well-educated are essential. Software designed to ensure the MTs have superior quality tools, such as reference sources, spellcheckers, etc. are part of their successful process. Thorough mentoring during the input stage when undertaking new work is an effective investment to ensure fewer incomplete reports and better quality overall economically. Editors trained to assess and provide feedback in an educational and thoughtful way at these final quality checkpoints will ensure better quality at the beginning of the process, thus further optimizing the QA effect.

It is possible that some portions of the QA process can be handled by those with lesser levels of transcription experience. For example, document format and demographic data may be reviewed and corrected by an individual with very little transcription experience, assuming he or she has knowledge of the word processing software and facility specifications. Considering the scarcity of qualified editors, this approach makes it possible for the editing staff to focus on content and maximize productivity. However, the QA process should not stop there. The integrity of the
document is greater than the sum of its parts. Therefore, it is important that quality personnel retain a central position in the workflow process.

**CONCURRENT REVIEW**
To fully assess the abilities of a newly hired or inexperienced originator or transcriptionist, 100% of the work needs to be reviewed before delivery to the medical record (concurrent review). The goal is both broad-based and specific education. One hundred percent concurrent review should be considered a transitional stage, with the expectation that the originator or MT will apply the feedback given by the editing staff and gain experiential knowledge leading to a consistently appropriate accuracy score. As they meet departmental quality goals, it may be appropriate to reduce the 100% review incrementally or to limit reviews to only certain categories at 100% while continuing with unannounced audits within all categories to verify the application of their knowledge base. Exposure to a variety of categories with careful mentoring and constructive feedback should lead to steady improvement and proficiency.

Those who are cross-training on new categories may also require 100% concurrent review of these particular documents. For MTs, every facility/dictator has idiosyncrasies that the MT or an originator such as speech recognition must learn, including colloquialisms, the names of local places and events, and other healthcare provider names (e.g. referring physicians, therapists, counselors, assistants, nurse practitioners, etc). Each originator and each facility has peculiarities which are difficult to document, even in the most diligent attempts to maintain detailed specification sheets.

**Flagged Documents**
Regardless of originator or MT experience, there are inevitably instances where resolution of potential inaccuracies or verification of information needs to occur before authentication. The workflow process needs to efficiently enable the ability to designate, or flag, a document for review by a member of the quality assessment staff before the file is processed for authentication. The workflow needs to allow for concurrent review of flagged documents by swiftly processing it to the QA department for remediation or completion. In this case, the purpose of QA is for the accurate completion of the report and/or resolution of the problem. Flagged reports often bring to the forefront the difficulties caused by poor input. When appropriate, feedback and/or clarification to and from the originator of the file should be requested.

Flagged reports are not the best type of reports to be used for an assessment of overall MT performance, since these reports ordinarily represent unique circumstances related most often to questionable or unclear dictation. However, patterns of errors made by individuals can be detected and referrals should be made.
for an accelerated QA audit of random samples for those individuals. Editors should note patterns for frequent flagging that may indicate either lack of knowledge or poor effort in researching, as overuse of the flagging tool creates inefficiencies in the process overall, delaying turnaround time.

**RETROSPECTIVE REVIEW**
Although random audits for the purpose of review would ideally be performed in a concurrent time frame, this is often not feasible due to TAT constraints. When such constraints require that quality reviews be performed retrospectively, that is, after the completed documents have been authenticated, procedures should be established to perform audits before the original files have been purged and within 24 hours of the originator or transcriptionist input. If a quarterly or yearly audit is being performed, it should be done with random samples culled from throughout the quarter or year that were done near the time of transcription. (Doing reviews near the time of transcription enhances the teaching value and puts corrective action in place sooner.) Trending reports should be available to track progress.

**ORIGINATOR ASSESSMENT**
It is important to recognize the impact the originator’s quality has on the document. Serious difficulties in the transcript that result directly from the originator should not redound upon the transcriptionist (i.e. with negative point values) in a quality review. Recognizing and documenting author problems, and following through with effective feedback, assists in the quest for patient safety and document integrity. Originators of alternative documentation methods can be evaluated on content errors, missing information, format compliance, and style issues. Dictating originators can be evaluated based on vocal variations (accent, speed, articulation, volume), content errors (terminology, grammar, completeness of information, style), and environmental effects (background noise, equipment). The editor needs to understand the slang and idiomatic expressions that dictators may use in various areas of the country, be aware of the impact these may have on the medical meaning, and understand when they are appropriate to the dictator's style.

**FEEDBACK**
Quality assessment policies and practices should not be punitive, and quality editors should not be tyrannical in their approach. There can be unjust severity applied in a too rigorous application of rules without consideration for the effect on the document or without investigation into the cause of the problem. For example, omission of an article (a, an, the) certainly represents an omitted word but does not qualify as an error affecting patient safety. Leaving too many blanks in a document can be a flaw but one not attributable to an MT if caused by in comprehensible dictation. The method of review and the communication of results must be thorough, fair, consistent, and understood by all parties.
Editors should adopt an educational approach through a sharing of their expertise. If the position is viewed as an opportunity for ongoing training, rather than as a “grading” task, there will be a thorough and welcomed opportunity for continuous improvement throughout the organization. The outcome of the quality review should be presented to the originator or transcriptionist in an organized way within 24 hours of their work. For the transcriptionist, the feedback should include corrected and/or inserted text with references to support the edits made. In addition to identifying areas for improvement, the review should render objective data and quality scores for the sake of departmental, originator or MT review (see methodologies below). The combination of objective data and informative feedback creates the successful synergy of a sound QA program. As noted in the ASTM standards, an opportunity to challenge the review should be offered, reflecting a true facility commitment to process improvement and professional development.

Feedback to originators and transcriptionists should include the frequency of occurrence of the specified critical, major, and minor flaws found in regular random samplings of their documentation. (See Tables 1 and 3) Additionally, the overall rating of their content, format, vocal variations, and environmental effects should also be communicated at regular intervals when improvements are desired. Quality editors should be tactful in approaching appropriate staff or authors for assistance in resolving difficult questions within flagged reports. These may include incomprehensible phrases that could be researched within the patient record for resolution, risk management issues within the text (expletives, inappropriate personal opinions, confidentiality breaches), or text that appears to be in error. See also the Dictation Best Practices Tool Kit published by AHDI for specific recommendations.

All feedback procedures, including email and email attachments, should be compliant with HIPAA privacy and security guidelines, as well as those established within the department or facility.
A goal of these best practice recommendations is to assess quality in order to generate improvement. The objective of the improvement phase is to eliminate critical and major errors (and minor errors, especially when their cumulative impact creates major problems) through education, feedback and mentoring.

Tallying of each of the error types is recommended. These should be tallied by category (critical, major, minor) and for additional value, by specific error type. (See Quality Improvement Tables 1 and 3.) Thus as error tallies of the MT or author are accumulated, a pattern of strengths and weaknesses will emerge, allowing for interventional recommendations to be made. This tallying of errors by type can be done simultaneously with the identification of errors during the document editing.

Tracking MT/Originator quality scores over a period of time with appropriate sampling establishes the quality level of the individual practitioner. Tracking collective individual document scores will establish the quality of the department.

In all QA situations, the goal is to eliminate critical and major errors rather than simply achieving good scores. Tabulating the scores alone cannot improve quality. Assessment simply lets you know where you are. When error-type patterns are identified (see Quality Improvement Tables 1 and 3), they lead to interventions that can improve quality. For example, if tallying and tracking errors reveals 20% of an MT/Originator’s errors are in medical word misuse, interventional mentoring can be undertaken by offering anatomy and physiology training.

For adequate analysis, at least two perspectives should be statistically addressed in documentation quality assessment (QA) for the sake of administrative quality overview:
1) QA score for the originator and/or MT. This is a process of identifying defects.
2) QA score for the document. Department scores are also derived from these. This is a process of identifying defective documents.

In both cases, errors are to be defined in the same manner. (See Appendix D)

Transcriptionists or originators are to be evaluated based on cumulative scores, without the emphasis being on single document scores.

A department score may be a reference to a transcription department in a healthcare facility. It may also be what a subcontractor offers to a healthcare provider organization relative to their work in an outsourcing situation. Alternatively, such assessments may be used to score a body of work based on the originator type,
such as speech recognition, handwriting recognition, structured text, interactive direct entry, or natural language processing.

**Quality Assessments:**
The quality assessment methods herein address both individual (emphasis on identifying defects) and department scores (emphasis on identifying defective documents). A choice of formulae is presented based on using either line counts or the number of documents as the base volume metric to determine a statistically valid sample set size:

1) Scores based on error values correlated to line counts. \((\text{Value/Volume})\)
2) Scores based on error values subtracted from 100 for each document, regardless of the size of the document with no line counting being utilized in the analysis. \((\text{Value from 100})\)
3) A pass/fail based on number of critical, major and minor errors with no line count (recommended for department scoring). \((\text{Pass/Fail})\)

**NOTE:** During the development of this document, lengthy due diligence was undertaken to identify and evaluate the various quality assessment approaches in practice throughout the industry. This effort identified strongly conflicting opinions on how to strike an appropriate balance between industry-wide standardization and individual department flexibility. Accordingly, the quality assessment choices recommended herein provide optional evaluation methods, yet in all cases, scoring is based on a standardized definition of errors and the relative value assigned to each.
METHOD A for QA SCORING: ERROR VALUE/VOLUME

This method is a precise evaluation of overall quality, since it relates errors (valued by their potential effect) to a standard volume measurement (lines). This method allows for detailed comparison in many situations (document-to-document or subcategory-to-subcategory as in author, MT, editor, report type, site) if the user chooses to record those details. It allows for weighting of errors based on their effects, and setting of score standards. Minor errors and their effects on the documentation can be acknowledged. It encourages more careful review of the entire document and drives contextual-specific feedback. This method also allows for parallel quality assessment scores for both levels of reporting: (1) scoring for an MT or other author by adding together all error values within a QA period and correlating that to the total number of lines produced in that period; and also (2) scoring of individual documents, which can be averaged together to reflect the collective score for a department.

In considering this method, the recommended error values have been calculated to give appropriate scoring to MTs or other originators when their evaluation is based upon the following mathematical scenario: total error values correlated to the total volume in an appropriately-sized sampling. (See computation and sampling methodologies below.) MTs or other originators can fairly be compared to one another for benchmarking when proportional line counts are reviewed.

The scoring values recommended will ensure that a document with 1 critical error will be a failed document up to a document length of 185 lines.

A potential and legitimate concern in the application of this method relates to the diversity of line counting methodologies in healthcare documentation. The values assigned to the errors in this method are based on a 65-character line that includes spaces and characters. Other units of measure or quantitative methodologies would need to be converted to a 65-character equivalent per the definition adopted here. As the industry moves toward the visible black character (VBC) for quantitative measurement, equivalent conversion will be required for that as well.

Going beyond the document score and the MT/Originator score, this best practices document also recommends the tallying of each of the error types for Quality Improvement measures to be implemented. These should be tallied by category (critical, major, minor) and for additional value, by specific error type. Thus as the MT or author’s error tallies are accumulated, a pattern of strengths and weaknesses will emerge, allowing for interventional recommendations to be made. This tallying of the errors by type can be done simultaneously with the identification of errors during the document editing. Each of the error type totals are subtotals to all errors found.
For a sample demonstrating this method in an evaluation of 3 documents with typical errors, see Quality Improvement Table 1.

<table>
<thead>
<tr>
<th>Error Type</th>
<th>Document 1</th>
<th>Document 2</th>
<th>Document 3</th>
<th>TOTAL</th>
<th>% Each Error Type to the Whole</th>
<th>% Each Error Category to the Whole</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRITICAL: Omitted Dictation</td>
<td>1 error</td>
<td></td>
<td></td>
<td>1 error of 28</td>
<td>3.5%</td>
<td>CRITICAL (2 errors of 28) 7%</td>
</tr>
<tr>
<td>CRITICAL: Medical Word Misuse</td>
<td></td>
<td>1 error</td>
<td></td>
<td>1 error of 28</td>
<td>3.5%</td>
<td></td>
</tr>
<tr>
<td>MAJOR: English Misspelling</td>
<td>1 error</td>
<td>1 error</td>
<td>1 error</td>
<td>3 errors of 28</td>
<td>10.7%</td>
<td>MAJOR: (3 errors of 28) 10%</td>
</tr>
<tr>
<td>MINOR: Grammar</td>
<td>3 errors</td>
<td>2 errors</td>
<td>5 errors</td>
<td>10 errors of 28</td>
<td>35.7%</td>
<td>STYLE: (23 errors of 28) 82%</td>
</tr>
<tr>
<td>MINOR: Punctuation</td>
<td>4 errors</td>
<td>6 errors</td>
<td>3 errors</td>
<td>13 errors of 28</td>
<td>46.6%</td>
<td></td>
</tr>
<tr>
<td><strong>ALL ERRORS</strong></td>
<td><strong>28</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The score standard for a department or individual is 98.00.

**ERROR CATEGORIES AND POINT VALUES: ERROR VALUE/VOLUME**
Errors are defined in terms of their potential impact on patient care. These errors are further defined in Appendix D.

**Critical Errors: 4 error points**
These errors impact patient safety, and include medical word misuse, incorrect drug or drug dosage, incorrect lab values and test names, omitted dictation, and patient identification error.

**Major Errors: 1 to 2 error points**
These errors impact document integrity, and include medical word misspelling, English word misspelling, incorrect verbiage, failure to flag a document, abuse of flagging documents, and protocol failures.

**Minor Errors: 0.25 to 0.5 points**
These errors include grammar, punctuation and formatting errors which do not impact the document in a critical or major way.

**Comments: 0 points**
These are educational improvement comments on flaws

**Dictation or Originator Flaws: 0 points**
These include critical, major, and minor errors by the document originator as defined by their impact on patient safety and document integrity. It is recommended to track these flaws as an indicator of negative quality impact so further steps may be taken to correct the problems at the source, and/or to find tools for those interpreting the document to draw conclusions about the intended communication.

**METHODOLOGY: ERROR VALUE/VOLUME**
Computation: A (total line values) – B (total error values) = C. C/A*100 = Quality Score

- Please note: Do not use a percentage sign. This is simply a score, not a percentage value.
- Rounding is to be done to the hundredths, since it is the scale of the errors, and the potential for round-off is large.

Compute the accuracy score as follows:

1. **Step 1.** Identify errors and assign numerical values as recommended
2. **Step 2.** Add the value of all errors. (This is B)
3. **Step 3.** Calculate the number of lines in the review (number of characters and spaces divided by 65). (This is A)
4. **Step 4.** Subtract the error value from the total line count. (The result is C)
5. **Step 5.** Divide this result (C) by the total line count (A) and multiply by 100. This is the Quality Score.

**EXAMPLE 1: ERROR VALUE/VOLUME**
The following is an example computation for a document totaling 50 lines with error values totaling 2:

1. **Step 1.** Identified errors: 1.5 points (Major Error - misspelled word),
   0.5 points (Minor Error - grammar)
2. **Step 2.** Total value of all errors: 2
3. **Step 3.** Number of lines in the document: 50
4. **Step 4.** 50-2 = 48
5. **Step 5.** 48/50 * 100 = 96.00

If this method is used for an individual document (A is the line count of the individual document, and B is the total error values found in that document), then the score obtained is the Quality Score of the Document. Adding together the scores for multiple documents in a department and dividing by the number of documents will give the Department Score for the period of time involved.
EXAMPLE 2: ERROR VALUE/VOLUME
The following is an example computation for a quarterly review of an originator or MT with the total lines reviewed being 1400 and the error totals being 29.25

Step 1  Identified Errors:  2 critical @ 4 points each; 5 major @1.5 points each; 55 minor @ 0.25 points each

Step 2  Total value of all errors:  29.25

Step 3  Total number of lines reviewed:  1400

Step 4  1400 – 29.25 = 1370.75

Step 5  1370.75/1400 * 100 = 97.91

If this method is used for an individual MT/Originator (A is the total number of lines reviewed over a period of time, and B is the total error values found within those lines during that period of time), then the score obtained is the Quality Score of that MT/Originator or Department for that period of time.

SAMPLING: ERROR VALUE/VOLUME
Individual departments or institutions must determine their quality benchmarks by an initial evaluation, which then determines their appropriate sample size for future assessment policies, given the constraints of practical application (size of department and resources available). The goal of any sample group is to be large enough to accurately reflect the whole while not being unnecessarily large.

For numerical averages in the Scoring by Error Value/Volume Method, the formula below is correct.

\[ n = \left( \frac{z \sigma}{E} \right)^2 \]

Where

- \( n \) is the calculated sample size
- \( z \) is the constant for 95% confidence level (1.96)
- \( \sigma \) is the estimate or historical measure of variation (standard deviation)
- \( E \) is the margin of error (risk)

This formula is the classic “statistic textbook” approach and computes sample size \( n \) assuming the desired accuracy \( E \) or margin of error and confidence \( z \) or relative risk of the procedure giving a correct result are known.

Stated another way:

\[ n = (z \times \text{sigma} / E)^2 \]

The component pieces of this equation are:

- \( z \) ... is a constant from the normal probability distribution. Use \( z = 1.96 \) for 95% confidence.
Best Practices
Healthcare Documentation Quality Assessment and Management

Sigma … is the estimate or historical measure of variation (standard deviation).
E is the margin of error (risk)

Based on an extensive review of the specific error values and sampled results in this
Best Practices method, the Standard Deviation used is 1. Over time, individual
departments may find that the actual standard deviation of scores is slightly higher
or lower and they could adjust accordingly. The Confidence Level is 95% (stated as
1.96). The recommended sample size for an individual is 1,350 lines or 30
documents per evaluation period, whichever is greater.

A table to use for considering various sample sizes and their attendant margin of
errors using the above formula would be Table 2 (Standard Deviation is 1 and
Confidence Level is 95% in all cases):

<table>
<thead>
<tr>
<th>n</th>
<th>Solve for E (Margin of Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 documents or 675 lines, whichever is greater</td>
<td>.51</td>
</tr>
<tr>
<td>30 documents or 1,350 lines, whichever is greater</td>
<td>.36</td>
</tr>
<tr>
<td>50 documents or 2,250 lines, whichever is greater</td>
<td>.28</td>
</tr>
</tbody>
</table>

**SAMPLING EXAMPLE: ERROR VALUE/VOLUME**
Suppose you wanted to estimate an MT/Originator or Department’s average Quality
Score to within 0.2 either way (see the .28 Margin of Error in the table above) with
95% confidence, and Standard Deviation of 1. The formula would render:

\[ n = \left(\frac{1.96 \times 1}{.2}\right)^2 = 49 \]  

so a sample of size 49 would do.

If you have real world constraints on sample size you can designate n first, and then
calculate what the corresponding margin of error is.

So, if you were constrained by time or practicality, or if you have an MT or originator
who has met the standard of 98.00 for an appropriate period of time, and you
wanted to sample 30 documents in an evaluation period instead of the 49 referenced
above, \( n = 30 \), you could plug that in:

\[ 30 = \left(\frac{1.96 \times 1}{E}\right)^2 \]  

and solve for E, which gives \( E = \frac{1.96 \times 1}{\sqrt{30}} = .36 \)
Thus sampling 30 reports raises the margin of error from .28 in the first example (which sampled 49 reports) to .36 in this sampling of 30. Similarly, if you used the calculation to determine the Margin of Error for 15 documents sampled, the Margin of Error would be .51. When presenting department or individual statistics, it is important to be transparent with this information so the Margin of Error is clear to the recipient.

A listing of samples from 15 to 50 is given herein so that managers have leeway to reduce the amount of sampling if 98.00 scoring has been maintained throughout an evaluation period or if there are other practical and compelling needs. The minimum recommended sampling is 30 per evaluation period until successive periods of 98.00 average scoring is achieved. This meets the statistical standards and falls in line with the Joint Commission standards for sampling in other areas. Of course 100% review with mentoring is advised during all probation periods, as previously discussed.

Above we gave a Quality Score example of 97.91 to an MT/Originator. The policy requires 98.00. Is it a passing score? Yes. If the Standard Deviation is 1 in the department’s experience, and the Confidence Level is 95% as recommended, then since the lines reviewed were 1400 (30 documents), the Margin of Error is .36 (see Table 2 or utilize the formula). Subtract that .36 Margin of Error from 98.00 and add that .36 Margin of Error to 98.00 to discover the range that will meet the 98.00 standard (97.64 through 98.36). Thus, with the given sample size it would take a score below 97.64 to provide convincing evidence that performance is below the 98.0 standard. Likewise, any average above 98.36 indicates a performance above the standard.

The sampling done for this reporting needs to be achieved randomly. Algorithms can be produced for this.
METHOD B for QA SCORING:
ERROR VALUE FROM 100

The next optional approach may be considered in those situations where adaptation is desired for the sake of practicality. This “Error Value from 100” method subtracts error values from a per-document value of 100 rather than the using the error-value-to-volume method. Each error is subtracted from a total score of 100 per document, the assumption being that 100 is a perfect document. This in essence makes each document equivalent to 100 lines when compared to the “Error-Value-to-Volume” method.

Departments dealing with diverse line counts because of various technologies, or who use other units of measure and want to avoid line counts completely, may find this option helpful. This method allows for detailed comparison in many situations (document-to-document or subcategory-to-subcategory as in author, MT, editor, report type, site) if the user chooses to gather all those details. It allows for weighting of errors based on their effects, and setting of score standards. It gives a way to acknowledge minor errors and their effects on the documentation and drives contextual-specific feedback.

Utilizing this method does not result in an equivalent relationship to the error values established by AHDI for the Value-to-Volume Method. A study was done comparing the results of 2,451 documents scored using both methods and comparing the results. In order to be equivalent, the error values had to be doubled when using the Value-from-100 Method. So, for example, if a hospital puts out an RFP and requires an average document score of 98 in the appropriate sampling, they need to realize that an MTSO using the Value-from-100 Method with the same error values of the Value-to-Volume Method will have a higher score than an MTSO using the Value-to-Volume Method, even if the same documents and errors were being tallied.

In all QA situations, the goal is to eliminate critical and major errors rather than simply achieving good scores. Tabulating the scores will not improve the quality. It lets you know where you are. If done properly, it indicates ways to improve that can be implemented to get the results needed – improved quality.

Going beyond the document score and the MT/Originator score, this best practices document also recommends the tallying of each of the error types for Quality Improvement measures to be implemented. These should be tallied by category (critical, major, minor) and for additional value, by specific error type. Thus as the MT or author’s error tallies are accumulated, a pattern of strengths and weaknesses will emerge, allowing for interventional recommendations to be made. This tallying of the errors by type can be done simultaneously with the identification of errors during the document editing. Each of the error type totals are subtotals to all errors found.
For a sample demonstrating this method in an evaluation of 3 documents with typical errors, see Quality Improvement Table 3.

**QUALITY IMPROVEMENT TABLE 3**

<table>
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<td></td>
</tr>
</tbody>
</table>

The score standard for a department or individual is 98.00.
ERROR CATEGORIES AND VALUES: ERROR VALUE FROM 100
Errors are defined in terms of their potential impact on patient care. These errors are further defined in Appendix D.

Critical Errors: 4 error points
These errors impact patient safety, and include medical word misuse, incorrect drug or drug dosage, incorrect lab values and test names, omitted dictation, and patient identification error.

Major Errors: 1 to 2 error points
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Dictation or Originator Flaws: 0 points
These include critical, major, and minor errors by the document originator as defined by their impact on patient safety and document integrity. It is recommended to track these flaws as an indicator of negative quality impact so further steps may be taken to correct the problems at the source, and/or to find tools for those interpreting the document to draw conclusions about the intended communication.

METHODOLOGY: ERROR VALUE FROM 100
Computation: A (100) – B (total error values) = C (Quality Score).

Please note: Do not use a percentage sign. This is simply a score, not a percentage value.
Rounding is to be in the hundredths, since it is the scale of the errors, and the potential for round-off is large.

Compute the accuracy score as follows:

Step 1. Identify errors and assign numerical values as recommended.
Step 2. Add the value of all errors. (This is B)
Step 3. Establish the volume value. 1 document = 100. (This is A)
Step 4. Subtract the error value from 100. (A-B)
The result is C. (Quality Score)

If this method is used for an individual document (A is 100 and B is the total error values found in that document) then the Score obtained is the Quality Score of the Document.
To obtain the Quality Score of an MT/Originator over a period of time, add together the scores of the documents and divide by the number of documents in that period of time.

**EXAMPLE 1: ERROR VALUE FROM 100**

The following is an example computation for the same document used in Example 1 of the Value to Volume Method:

1. **Step 1** Identified errors: 1.5 points (Major, misspelled word), 0.5 point (Minor, grammar)
2. **Step 2** Total value of all errors: 2
3. **Step 3** 100
4. **Step 4** 100 – 2 = 98

**EXAMPLE 2: ERROR VALUE FROM 100**

In order to compute the quality score of an MT/Originator over an evaluation period where 30 documents have been given a quality score, add together the quality scores of each document and divide by 30.

**SAMPLING: ERROR VALUE FROM 100**

Individual departments or institutions must determine their quality benchmark by an initial evaluation of sizable proportions which then determines their appropriate sample size for future assessment policies, given the constraints of practical application (size of department and resources available).

For numerical averages in the Value from 100 Method, the formula below is correct.

\[
n = \left[ \frac{z \cdot \sigma}{E} \right]^2
\]

Where
- \( n \) is the calculated sample size
- \( z \) is the constant for 95% confidence level (1.96)
- \( \sigma \) is the estimate or historical measure of variation (standard deviation)
- \( E \) is the margin of error. (Risk)

This formula is the classic “statistic textbook” approach and computes sample size (n) assuming the desired accuracy (E or margin of error) and confidence (z or relative risk of the procedure giving a correct result) are known.

Stated another way:
\[ n = (z \cdot \sigma / E)^2 \]

The component pieces of this equation are:
- \( z \) … is a constant from the normal probability distribution. Use \( z = 1.96 \) for 95% confidence.
Sigma ... is the estimate or historical measure of variation (standard deviation). 
E is the margin of error (risk)

Based on an extensive review of the specific error values and sampled results in this 
Best Practices method, the Standard Deviation used is 1. Over time, individual 
departments may find that the actual standard deviation of scores is slightly higher 
or lower and they could adjust accordingly. The Confidence Level is 95% (stated as 
1.96). The recommended sample size for an individual is 30 documents or 1350 
lines per evaluation period, whichever is greater.

A table to use for considering various sample sizes and their attendant margin of 
errors using the above formula would be Table 4 (Standard Deviation is 1 and 
Confidence Level is 95% in all cases):

<table>
<thead>
<tr>
<th>n</th>
<th>Solve for E (Margin of Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 documents or 675 lines, whichever is greater</td>
<td>.51</td>
</tr>
<tr>
<td>30 documents or 1,350 lines, whichever is greater</td>
<td>.36</td>
</tr>
<tr>
<td>50 documents or 2,250 lines, whichever is greater</td>
<td>.28</td>
</tr>
</tbody>
</table>

**SAMPLING EXAMPLE: ERROR VALUE FROM 100**
Suppose you wanted to estimate an MT/Originator or Department’s average Quality 
Score to within 0.2 either way (see the .28 Margin of Error in the table above) with 
95% confidence, and Standard Deviation of 1. The formula would give:

\[ n = \left(\frac{1.96 \times 1}{.2}\right)^2 = 49 \]  
so a sample of size 49 would do.

If you have real world constraints on sample size you can designate n first, and then 
figure out what the corresponding margin of error is.

If you were constrained by time or practicality from doing 49 samples, and you 
wanted to sample 30 documents in an evaluation period instead, you need to 
determine what the adjusted Margin of Error would be:

\[ n = 30. \quad 30 = \left(\frac{1.96 \times 1}{E}\right)^2, \text{ and solve for } E, \text{ which gives } E = \frac{1.96 \times 1}{\sqrt{30}} = .36 \]

Thus sampling 30 documents raises the margin of error from .2 in the first example 
(that sampled 49 documents) to .36 in this sampling of 30. Similarly, if you used the
calculation to determine the Margin of Error for 15 documents sampled, the Margin of Error would be .51.

A listing of samples from 15 to 50 is given herein so that managers have leeway to reduce the amount of sampling if 98.00 scoring has been maintained throughout an evaluation period. Of course 100% review with mentoring is advised during all probation periods, as previously advised. The minimum recommended sampling is 30 per evaluation period until successive periods of 98.00 average scoring is achieved. This meets the statistical standards and falls in line with the Joint Commission standards for sampling in other areas.

If the Quality Score for a review of 30 documents is 97.91 and the policy requires 98.00, is it a passing score? Yes. If the Standard Deviation is 1 in the department’s experience, and the Confidence Level is 95% as recommended, then since the documents reviewed were 30, the Margin of Error is .36 (see Table 4 or utilize the formula). Subtract that Margin of Error from the required score of 98.00 and add that to 98.00 to discover the range that will meet the 98.00 standard (97.64 through 98.36). Thus with the given sample size, it would take a score below 97.64 to provide convincing evidence that performance is below the 98.0 standard. Likewise, any average above 98.36 indicates a performance above the standard.

The sampling done for this reporting needs to be achieved randomly. Algorithms can be produced for this.
METHOD C for QA SCORING:
PASS/FAIL

This method is appropriate for assessing a department rather than individuals. Based on the number of critical, major and minor errors (as defined in Appendix D), the document either passes or fails. It does not give a weight value to errors or provide scores. It is simply reviewing an appropriate sampling of documents to see whether it meets the most basic conditions for quality. The department standard for documents to pass will be 98% of those reviewed.

This method may be appropriate to use when weights and scores are difficult to apply accurately. It may be advantageous in a department that does not use line counting as a quantitative measure of production or one that has a variety of line counting methods. The information obtained in this method focuses particularly on reducing the number of critical and major errors in a department. A disadvantage is that document-to-document or subcategory-to-subcategory (author, MT, editor, report type, site) comparisons lack detail as to how those reductions may be achieved. Another potential downfall is that reviewers may score less cautiously because they are looking for a minimal threshold of competence rather than fine gradations of competence.

Ideally this method is achieved by reviewing the final version of the document and its source (i.e. voice file or handwriting). The definitions found in Appendix D should be applied at least by the critical, major, and minor categories. More information could be gathered to make recommendations for improvement if the specific error types are named in addition to their categories.

THE PASS/FAIL CRITERIA ARE:
1 critical error or more: fail
2 major errors or more: fail
9 minor errors or more: fail
Any combination of major and minor errors which reach a total of 10 errors: fail

Percentage of cases not to “fail”: 98%  p = 0.98

SAMPLING: PASS/FAIL
The formula below can be used to compute sample size (n) for Proportion (Pass/Fail).
As equation editor:

\[ n = \left( \frac{z}{E} \right)^2 p(1-p) \]

Also stated as: \( n = (z/E)^2 p*(1-p) \)
z ... is a constant from the normal probability distribution. Use $z = 1.96$ for 95% confidence.

$p$ ... is the desired proportion of passing documents. (Example: At 98% passing documents, use $p=0.98$, $1-p = 0.02$.)

$E$ is the margin of error. (Example: To estimate the proportion within two percent either way use $E=0.02$)

Table 5 indicates a range of margin of error depending on the sampling done.

<table>
<thead>
<tr>
<th>$Z$ (95% confidence level)</th>
<th>$p$ (98% passing documents)</th>
<th>$E$ (margin of error)</th>
<th>$n$ (sample size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.96</td>
<td>0.98</td>
<td>0.008</td>
<td>1177</td>
</tr>
<tr>
<td>1.96</td>
<td>0.98</td>
<td>0.01</td>
<td>753</td>
</tr>
<tr>
<td>1.96</td>
<td>0.98</td>
<td>0.02</td>
<td>189</td>
</tr>
</tbody>
</table>

**EXAMPLE: PASS/FAIL**

Based on sample size of 753 and 95% confidence level, the margin of error for the proportion of passing documents is .01 which means 97% to 99% passing documents meet the goal. (Goal percentage is .98 minus margin of error of .01 = .97.) If 97.9% of the 753 documents passed, that is in compliance since it is above 97%.

The sampling done for this reporting needs to be achieved randomly. Algorithms can be produced for this.
Recommendations

Implementing a quality assessment program requires consideration of every step in the voice-to-text conversion process. The following summary recommendations are made:

**TRANSCRIPTION DEPARTMENT / OUTSOURCED VENDOR RECOMMENDATIONS:**

1. Assess each of the factors that affect the outcome of the documentation process including work flow, turnaround time, originator methodologies, technology (hardware and software), and the skills of the transcription staff. Although all components contribute to the overall quality of the process and thus department scoring, shortcomings introduced by inadequate technology should not be counted against individual MT/Originators, although they need to be assessed for their effect on the quality.

2. Check points for quality assessment should be set within the workflow process. Check points of prime importance are:
   - quality at the time of originator input
   - quality at the time of transcription, edit and review
   - quality at the time of final QA for completion of incomplete documents
   - quality at the time of QA audit, whether concurrent or retrospective

   Ensuring the availability of appropriate resources, such as ready access to knowledge bases early in the process, will both reduce the number of reports manually sent to QA and improve the overall quality scores.

3. Establish an adequate QA budget for personnel, resources, software, and continuing education. Three percent of the total department budget is offered as a suggested starting point.

4. In each facility, establish quality assessment guidelines and a style guide. Distribute policies and procedures to all documentation originators and transcription staff.

5. Establish facility specifications and maintain databases of pertinent, facility-specific information.

6. Establish workflow procedures in the originator-to-text process that are practical to achieve accuracy and appropriate turnaround time. In the transcription portion of the work flow, allow for 100% concurrent review of entry-level, newly hired or cross-training MTs and concurrent review of flagged reports. Establish workflow procedures for routine assessment of an appropriate portion of random reports for MTs and originators who are not under 100% review. If possible this should be concurrent, but establish workflow procedures for retrospective review if necessary to accommodate timely completion of documents.

7. Establish a feedback mechanism to originators and MTs that is education-based. Track improvements following intervention and map any trends.
8. Train the quality assessment staff in the computation methods described herein and require consistency and objectivity among the editing staff. In particular, acknowledge and encourage development of critical thinking skills, continued education in the definition and application of the quality standards, and successful mentoring skills. Errors must be identified within their context.

9. For adequate analysis, at least two perspectives are to be addressed statistically in documenting quality assessment (QA) for the sake of administrative quality overview:
   1) QA score for the originator and MT. This is a process of identifying defects.
   2) QA score for the document. (Department scores are derived from these.) This is a process of identifying defective documents.

10. Select from the recommended formulae based on department needs.
   1) QA Scoring: Error Value/Volume
       Scores based on error values correlated to total line counts.
   2) QA Scoring: Error Value from 100 by Document
       Scores based on error values subtracted from 100 for each document, regardless of the size of the document.
   3) QA Scoring: Pass/Fail
       A pass/fail based on the number of critical, major and minor errors (recommended for department scoring only).

11. In any contractual arrangements involving quality requirements, transparency of the formulae and the standards required is essential. A mutual understanding of the effects that sample sizing has on the statistical margin of error, for example, needs to be discussed openly and agreed upon.
INDUSTRY RECOMMENDATIONS:

1. An industry quality benchmark study should be undertaken by AHDI to assess the present state of quality in the industry using all formulae recommended herein on each document assessed in the interests of comparison.

2. Follow-up study should be done on the use of the standards herein during the next year to test whether there is reliability across QA editors regarding the application of the error criteria consistently, whether the standard deviation, margin of error and sampling rates have been correctly identified on both a practical and effectual level, and whether there is a correlation between department quality scores and quality patient care.

3. Identify transcription and alternative originators, as well as vendors willing to participate in studies involving the policies promoted herein.

4. Conduct educational outreach for QA administrators concerning the statistical elements involved in properly utilizing the standard deviation, confidence level, margin of error, sampling and reporting necessary to make appropriate decisions within their department.

5. Conduct studies and educational outreach to determine effective evaluation of intervention techniques in relationship to tallied error relationships.

6. Conduct educational outreach to QA editors for the critical thinking skills required and for the practical application of the error identification process relative to the patient safety and document integrity elements of assessment.

7. Definition of certain terms in the industry need to be clarified and adapted by mutual consent, including quality editor, quality auditor, proofreaders, correctionists, editors (of speech recognition), quality module (in transcription software programs), quality assessment, quality assurance.

8. It is recommended that vendors work closely with the organizations and users subscribing to the best practices recommended herein to improve their products’ results, measuring them to these statistical standards.
REFERENCES

2 Ibid.
3 Ibid.
4 Ibid.
5 Ibid.
7 AHIMA “Scenarios and Solutions for the Future of Transcription” April 2005: 9
9 AHIMA “Scenarios and Solutions for the Future of Transcription” April 2005: 9
11 Ibid.
12 Ibid.
13 Ibid.
14 Ibid.
19 Ibid.
Appendix A

Medical Transcriptionist Job Descriptions: Results of a Benchmarking Analysis of MT Professional Levels

Professional Levels
In an independent benchmarking study of the medical transcription profession by the Hay Management Consultants (HayGroup), three distinct professional levels for medical transcriptionists were identified and described as presented below. The HayGroup is a worldwide human resources consulting firm with extensive expertise in work analysis and job measurement.

Compensation
Subsequent to this benchmark study of the job content levels of MTs, the HayGroup conducted a compensation survey, analyzing pay as it relates to these levels. (Hay's survey methodology complied with federal antitrust regulations regarding healthcare compensation surveys.) The results include information on transcription pay at the corporate level (healthcare organizations and MT businesses) and compensation for independent contractors. The data are further presented by geographic region, size of business, types of pay programs (pay for time worked and pay for production), and reward programs (benefits, etc.). The Hay report, "Compensation for Medical Transcriptionists," is contained in a 30-page booklet.

<table>
<thead>
<tr>
<th>Professional Level 1</th>
<th>Professional Level 2</th>
<th>Professional Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position Summary</strong></td>
<td><strong>Position Summary</strong></td>
<td><strong>Position Summary</strong></td>
</tr>
<tr>
<td>Medical language specialist who transcribes dictation by physicians and other healthcare providers in order to document patient care. The incumbent will likely need assistance to interpret dictation that is unclear or inconsistent, or make use of professional reference materials.</td>
<td>Medical language specialist who transcribes and interprets dictation by physicians and other healthcare providers in order to document patient care. The position is also routinely involved in research of questions and in the education of others involved with patient care documentation.</td>
<td>Medical language specialist whose expert depth and breadth of professional experience enables him or her to serve as a medical language resource to originators, coworkers, other healthcare providers, and/or students on a regular basis.</td>
</tr>
<tr>
<td><strong>Nature of Work</strong></td>
<td><strong>Nature of Work</strong></td>
<td><strong>Nature of Work</strong></td>
</tr>
<tr>
<td>An incumbent in this position is given assignments that are</td>
<td>An incumbent in this position is given assignments that require a</td>
<td>An incumbent in this position routinely researches and</td>
</tr>
</tbody>
</table>

40
### Knowledge, Skills & Abilities

<table>
<thead>
<tr>
<th>Professional Level 1</th>
<th>Professional Level 2</th>
<th>Professional Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>matched to his or her developing skill level, with the intention of increasing the depth and/or breadth of exposure. OR The nature of the work performed (type of report or correspondence, medical specialty, originator) is repetitive or patterned, not requiring extensive depth and/or breadth of experience.</td>
<td>seasoned depth of knowledge in a medical specialty (or specialties). OR The incumbent is regularly given assignments that vary in report or correspondence type, originator, and specialty. Incumbents at this level are able to resolve non-routine problems independently, or to assist in resolving complex or highly unusual problems.</td>
<td>resolves complex questions related to health information or related documentation. AND/OR is involved in the formal teaching of those entering the profession or continuing their education in the profession. AND/OR Regularly uses extensive experience to interpret dictation that others are unable to clarify. Actual transcription of dictation is performed only occasionally, as efforts are usually focused in other categories of work.</td>
</tr>
</tbody>
</table>

1. Basic knowledge of medical terminology, anatomy and physiology, disease processes, signs and symptoms, medications, and laboratory values. Knowledge of specialty (or specialties) as appropriate.
2. Knowledge of medical transcription guidelines and practices.
3. Proven skills in English usage, grammar, punctuation, style, and editing.
4. Ability to use designated professional reference materials.
5. Ability to operate word processing equipment, dictation and transcription equipment, and other equipment as specified.

1. Seasoned knowledge of medical terminology, anatomy and physiology, disease processes, signs and symptoms, medications, and laboratory values. In-depth or broad knowledge of a specialty (or specialties) as appropriate.
2. Knowledge of medical transcription guidelines and practices.
3. Excellent skills in English usage, grammar, punctuation, and style.
4. Ability to use an extensive array of professional reference materials.
5. Ability to operate word processing equipment, dictation and transcription equipment, and other equipment as specified, and

1. Recognized as possessing expert knowledge of medical terminology, anatomy, and physiology, disease processes, signs and symptoms, medications, and laboratory values related to a specialty or specialties.
2. In-depth knowledge of medical transcription guidelines and practices.
3. Excellent skills in English usage, grammar, punctuation, and style.
4. Ability to use a vast array of professional reference materials, often in innovative ways.
5. Ability to educate others (one-on-one or group).
6. Excellent written and oral communication skills.
<table>
<thead>
<tr>
<th>Professional Level 1</th>
<th>Professional Level 2</th>
<th>Professional Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Ability to work under pressure with time constraints.</td>
<td>to troubleshoot as necessary.</td>
<td>7. Ability to operate word processing equipment, dictation and transcription equipment, and other equipment as specified, and to troubleshoot as necessary.</td>
</tr>
<tr>
<td>7. Ability to concentrate.</td>
<td>6. Ability to work independently with minimal or no supervision.</td>
<td>8. Proven business skills (scheduling work, purchasing, client relations, billing).</td>
</tr>
<tr>
<td>8. Excellent listening skills.</td>
<td>7. Ability to work under pressure with time constraints.</td>
<td>9. Ability to understand and apply relevant legal concepts (e.g., confidentiality).</td>
</tr>
<tr>
<td>10. Ability to understand and apply relevant legal concepts (e.g., confidentiality).</td>
<td>9. Excellent listening skills.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Excellent eye, hand, and auditory coordination.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Proven business skills (scheduling work, purchasing, client relations, billing).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. Ability to understand and apply relevant legal concepts (e.g., confidentiality).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13. Certified medical transcriptionist (CMT) status preferred.</td>
<td></td>
</tr>
</tbody>
</table>
Medical Transcriptionist Editor Job Description
The medical transcription editor must be a highly skilled level-2 medical transcriptionist with proven skills in all work types, specialties, accents, and dialects. The MT must possess acute auditory and acoustical sensitivity in coordination with keen hand/eye coordination, as would be expected in an experienced medical proofreader. The editor must also be proficient in referencing and researching, along with excellent communication skills to give consistent constructive feedback to the transcriptionists. Different facilities use different titles, e.g., editors, proofreaders, and proofreaders. The editor would report to a lead editor or transcription supervisor, as directed by the facility.

Minimum Knowledge, Skills, and Abilities Required
- Must be a qualified professional level 2 transcriptionist.
- Demonstrate ability to work in all work types and specialties.
- Demonstrate quality transcription work, consistently maintaining an accuracy score of 98% or higher.
- Certified transcriptionist preferred.
- Advanced knowledge of medical terminology, anatomy, physiology, disease processes, signs and symptoms, medications, and laboratory values.
- In-depth knowledge of medical transcription guidelines (The AAMT Book of Style) and practices.
- Excellent written and oral communication skills, including grammar, punctuation, and style, in order to provide quality feedback to the transcriptionist.
- Excellent acoustical skills.
- Demonstrate an understanding of the medicolegal implications and responsibilities of the healthcare record, ensuring compliance with local, state, and federal rules and regulations, along with security standards and privacy practices.
- Ability to understand diverse accents, dialects, and varying dictation styles.
- Proficient in referencing and researching.
- Full library of references (books/electronic) and Internet access.
- Ability to multi-task and work under pressure with time constraints.
- Ability to work independently with minimal or no supervision.
- Ability to operate computer, multiple software applications, transcription equipment, and other office equipment necessary, including the ability to accept voice/text files in multiple formats and word processing software.
- Organizational skills for file management.
Appendix B

Principal Duties and Responsibilities

- Edit the transcribed document against actual dictation.
- Edit documents consistently and fairly according to transcription guidelines, standards of style, and formats of practice.
- Using preferred standard quality scoring guidelines, calculate and score reports consistently and fairly, weighing the varying degrees of errors against the documentation length.
- Utilize all available reference tools to ensure the accuracy of the transcribed document.
- Provide timely and consistent quality feedback to inform and update the transcriptionists regarding quality issues and areas of concern to help eliminate repetition of errors.
- Recognize, interpret, and evaluate inconsistencies, discrepancies, and inaccuracies in medical dictation and appropriately clarify and flag or report them, as needed.
- Identify potential risk management situations.
- Adhere to policies and procedures to contribute to the efficiency of the transcription department.
- Access patient’s health information as needed for further clarification.
- Transcribe reports as needed.
Appendix C

Quality Assessment Manager Job Description

The quality assessment manager must be a highly skilled editor with proven experience in the medical transcription profession. He or she must have demonstrated fair and unbiased judgment with the ability to review and coordinate a random review process of documents. This includes the process of monitoring, measuring, and reporting transcribed documents by transcriptionists and documents reviewed by editors. Different facilities use different titles, e.g., quality assessment coordinator, team leader, lead editor, or quality assessment specialist. The quality assessment manager would report to the transcription supervisor or as directed by the facility.

Minimum Knowledge, Skills, and Abilities Required

- Must be a highly qualified editor.
- Demonstrated leadership/management skills.
- Demonstrate ability to work in all work types and specialties.
- Demonstrate quality transcription work, consistently maintaining an accuracy score of 98% or higher.
- Certified transcriptionist preferred.
- Advanced knowledge of medical terminology, anatomy, physiology, disease processes, signs and symptoms, medications, and laboratory values.
- In-depth knowledge of medical transcription guidelines (The AAMT Book of Style) and practices.
- Excellent written and oral communication skills, including grammar, punctuation, and style, in order to provide consistent quality feedback to the transcriptionists, editors, and supervisors.
- Excellent acoustical skills.
- Demonstrate an understanding of the medicolegal implications and risk management responsibilities of the healthcare record, ensuring compliance with local, state, and federal rules and regulations.
- Ability to understand diverse accents, dialects, and varying dictation styles.
- Proficient in referencing, researching, reporting, tracking, and monitoring.
- Ability to multi-task with multiple priorities and time frames.
- Ability to work independently with minimal or no supervision.
- Ability to operate computer, multiple software applications, transcription equipment, and other equipment necessary, including the ability to accept voice/text files in multiple formats and word processing software.
- Organizational skills for file management.
- Mathematical skills, including calculations and statistics.
- Ability to communicate QA concerns/questions effectively with client/user.

Principal Duties and Responsibilities

- Direct efforts toward quality documentation, including providing procedures, training, and resources for transcription team members.
Appendix C

- Establish guidelines for identifying qualified applicants for transcription and quality assessment staff positions.
- Develop standards for employee performance review related to quality documentation.
- Establish criteria for quality reviews.
- Establish policies and procedures that contribute to the efficiency of the transcription department.
- Through a standard random selection process, select randomly transcribed or edited reports for review.
- Review the transcribed report against actual dictation, applying industry-specific standards provided by current resources and references.
- Using preferred standard quality scoring criteria, calculate and score reports consistently and fairly, weighing the varying degrees of errors against the documentation length.
- Provide timely and consistent feedback to the medical transcriptionist or editor in order to eliminate repetition of errors, build skills, and mentor the medical transcriptionist/editor.
- Recognize, interpret, and evaluate inconsistencies, discrepancies, and inaccuracies in the medical dictation, and appropriately clarify and/or report them as required.
Appendix D

QA ERROR DESCRIPTIONS

Critical Errors
A critical error is given the highest negative point value because of the seriousness of its consequences. A document containing a critical error should not pass QA. A critical error should be reserved for only those errors with the potential to directly compromise patient safety. If an error fits the description for Error #1, 2, or 3 below, but does not have the potential to directly compromise patient safety, it should be downgraded to a major or minor error, depending on whether the impact is to document integrity or whether the impact is minor.

Error #1: Medical Word Misuse

Value:  4.0 pts
Pass/Fail: One critical error fails the document

This category includes wrong drug or drug doses, wrong lab values, and/or wrong test names that could directly compromise patient safety. For instance, a wrong disease could be incorrectly attributed to a patient and then carried in the medical record for life, causing incorrect treatment and incorrect medical decisions, as well as inaccurate billing of the patient’s accounts. Similarly, a wrong lab value could result in a patient not receiving treatment or further testing when such treatment or testing is warranted.

If a misuse is repeated throughout the entire report, it could be counted as only one error in the report since it reflects one wrong piece of information on the part of the transcriptionist.

This category also includes improper use of abbreviations, acronyms, and symbols that are not to be used according to National Patient Safety Goals (NPSG) Standard 2b.

Error #2: Omitted Dictation

Value:  4.0 pts
Pass/Fail: One critical error fails the document

This category covers dictated information of a critical nature that was either carelessly omitted by the transcriptionist or deliberately omitted because the transcriptionist did not understand what was being said. Examples include omission of an entire laboratory finding because the value itself could not be heard, deleting negative or normal findings, or omitting entire sentences because the main part of it could not be understood. Creative transcription is
also included in this category. This refers to “making up” dictation (words and/or phrases) when what is dictated is not clear. Consideration should be given for difficult authors or dictation of poor quality.

Research, assistance from others, flagging the report, and leaving blanks constitute appropriate actions rather than omission. This category does not include inconsequential omitted words, such as articles or conjunctions nor what appear to be minor words (adjectives, adverbs, pronouns) omitted from typing too fast, unless they have serious consequences to the medical meaning. These types of errors would be downgraded to major or minor, depending on the consequence to the document. Clipped sentences are allowed if their use reflects the dictator’s style. This category is meant to apply to purposeful and/or serious omissions and/or fabrication(s).

**Error #3: Patient Identification Error**

Value: 4.0 pts  
Pass/Fail: One critical error fails the document

A patient identification error is one in which the wrong patient information is tied to the dictation. For example, a report that is dictated for 50-year-old John E. Doe (male) but is attributed to a chart for 20-year-old Joni Do (female). As with the other critical errors in this category, the error must directly compromise patient safety in order to be assessed this error weight (see error #12).

**Error #4: Upgrade of Major or Minor error due to patient safety impact**

Value: 4.0 pts  
Pass/Fail: One critical error fails the document

This category is for major or minor errors from the categories below that directly compromise patient safety. For example, “failure to flag” is considered a major error worthy of 1.0 pt., but a right/left discrepancy that poses a risk management issue and is not flagged by the transcriptionist could be upgraded to a critical error.

**Major Errors**

A major error carries a higher negative point value because of the impact it has on the integrity of the document. Major errors in this category do not pose a risk to patient safety. A major error that impacts both the integrity of the document AND patient safety should be upgraded to a critical error.

**Error #5: Abuse of Flagging/Blanks**
Appendix D

Value:  2.0 pts
Pass/Fail:  Two major errors fail the document

This category covers blanks left which, through research, the transcriptionist could have resolved. The purpose of this category is to limit abuse of leaving blanks for the sake of speed. Obviously, students and entry-level transcriptionists will leave more blanks initially and this is preferred to guessing. This error should be used only in those cases where the blank or flag is truly considered abusive.

Error #6:  Medical Word Misspelling

Value:  1.5 pts
Pass/Fail:  Two major errors fail the document

In addition to any medical words or medications that are misspelled, this category includes the use of an incorrect form of a medical word, for example, lingula instead of lingular or femur instead of femoral. This also includes failure to use combining forms and incorrect entries from text expanders. For instance, an author dictates that the patient is to see physical therapy (dictated PT) for followup; the transcriptionist uses pt, which expands to patient, and the final copy of the report reads, “The patient is to see patient for followup.” (However, if an incorrect expansion results in a critical error, such as incorrect diagnosis, this would be upgraded to a critical error.)

Error #7:  English Word Misspelling

Value:  1.5 pts
Pass/Fail:  Two major errors fail the document

In addition to misspelling English words, this category refers to misuse errors, which have more serious consequences, such as nouns, verbs, or important qualifying adjectives and adverbs (e.g. elicit/illicit, dissent/descent, affect/effect, apprise/appraise). These errors directly impact the integrity of the report. For instance: the risks and complications were given allowed (aloud).

Error #8:  Incorrect Verbiage

Value:  1.5 pts
Pass/Fail:  Two major errors fail the document

This category refers to dictation that is transcribed differently than dictated, but without significant impact on the medical meaning. This includes inappropriate/excessive editing.
Appendix D

Care should be taken to remain true to the dictator’s style while still maintaining accuracy. Therefore, this does not pertain to changes made for the purpose of correcting grammar or word usage. This also differs from creative transcription (see error #2).

**Error #9: Failure to Flag**

Value: 1.0 pts  
Pass/Fail: Two major errors fail the document

This category pertains to times when a report should be flagged for clarification and the transcriptionist fails to do so. Failure to flag the following dictation would be an example. “I preferred to do [a certain] procedure, but the HMO would not approve that one, so I am doing this procedure which I do not think will have as good an outcome.”

**Error #10: Protocol Failure**

Value: 1.0 pts  
Pass/Fail: Two major errors fail the document

A protocol failure is one in which a transcriptionist fails to follow a specific protocol or facility preference. For example, a facility may require the date of service be filled in on each document, and the transcriptionist fails to include this although it was available.

**Error #11: Upgrade of Minor Error due to impact on integrity of document**

Value: 1.5 pts  
Pass/Fail: Two major errors fail the document

This category is used to upgrade a minor error that compromises the integrity of the document. For instance, a physician dictates an inflammatory or derogatory remark about the patient that puts the physician at risk for a lawsuit, and the transcriptionist fails to edit these remarks.

**Error #12: Downgrade of Critical Error due to less than critical impact**

Value: 1.5 pts  
Pass/Fail: Two major errors fail the document

This category is used to downgrade a critical error that does not compromise patient safety but still impacts the integrity of the document. An example would be using the wrong medical word (medical word misuse) without directly affecting patient safety (stating there is a family history of “corporal” tunnel syndrome, for example).
Appendix D

Minor Errors
The correction of a minor error is meant to point out recommended areas of improvement for the transcriptionist as well as to improve the documentation. These errors do not compromise patient safety or the integrity of the report unless the cumulative effect of many minor errors blurs the meaning of the text. The primary goal of correcting a minor error is instructional.

Error #13: Grammar Error

Value: 0.5 pts
Pass/Fail: Nine minor errors fail the document

Grammar errors may include incorrect subject-verb agreement, incorrect use of medical abbreviations, use of the wrong part of speech, incorrect use of singular and plural nouns, use of the wrong verb (e.g. laying/lying) or verb tense, failure to correct redundancies and inconsistencies, and failure to edit slang or inflammatory remarks when appropriate. It is of note that if incorrect medical abbreviations are those referred to in Error #1, or if inconsistencies or editing failures impact patient safety or document integrity, they would of course be upgraded appropriately.

Error #14: Miscellaneous/Other

Value: 0.5 pts
Pass/Fail: Nine minor errors fail the document

This category covers errors that do not fit into the other categories. For instance, improper capitalization, addition of words that were not dictated but that do not significantly affect the meaning of the sentence or report, and errors of questionable cause when the recording quality is poor or a foreign accent is at fault. This category also covers formatting errors.

Error #15: Downgrade of Critical or Major Error due to minimal impact

Value: 0.25 pts
Pass/Fail: Nine minor errors fail the document

This category can be used to downgrade any error that has little to no impact on the integrity of the report and does not compromise patient safety. For example, omitting the word “the” in “The patient was in acute distress.”

Error #16: Punctuation

Value: 0 pts
Pass/Fail: Nine minor errors fail the document
Appendix D

Punctuation errors may include misplaced commas that do not alter the meaning of the sentence and the improper use of colons or semicolons, quotation marks, and misplaced periods.

Negative Dictator Effect Errors
These errors have no point values but are used to recognize a transcriptionist's error or difficulties in the context of poor dictation. These are optional errors to consider marking in the interests of identifying difficulties with dictator input.

Error #17: Critical Negative Dictator Effect – 0.0 pt
This category would be used to point out a defect of a critical nature that was clearly attributed to poor dictation. For example, omitted dictation based on difficulty interpreting a very heavy accent. Another example would be incorrect patient identification due to inaccurate or insufficient information given by the dictator. This error may be utilized whether or not the transcriptionist flagged the document, since the purpose is to determine the difficulty encountered in producing an accurate document.

Error #18: Major Negative Dictator Effect – 0.0 pt
This category would be used to address a documentation defect in any of the major categories that was obviously incurred because of poor dictation quality or inaccurate information given by the dictator. Once again, this error may be utilized whether or not the transcriptionist flagged the document, since the purpose is to determine the difficulties in producing an accurate document.

Error #19: Minor Negative Dictator Effect – 0.0 pt
This category would be used to draw attention to a minor flaw in poor dictation. For example, the dictator has used the wrong form of a verb, which may or may not have been corrected by the transcriptionist.
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