

*HCCA's 12<sup>TH</sup> ANNUAL* COMPLIANCE INSTITUTE

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**Speech Recognition Technology  
Adoption and Documentation Compliance**



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**SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

**PURPOSE:**

To examine the impact of Speech Recognition (SR) for documentation and the related risk considerations.

Basis for Discussion: Cost savings and efficiency improvements are compelling reasons to deploy speech recognition. Separating myths from truths and understanding the nuances this automation brings and the impacts those issues have on risk is to guide your assessment and strategic response as you endeavor to mitigate and manage risk.



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## **SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

### **Risk Management - Definitions:**

1. The art, act or manner of handling the chance of damage, injury or loss
2. A structured approach to mitigating risk through planned assessment and strategic response



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## **SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

### **QUESTION:**

What is the most relevant impacting factor when it comes to mitigating risk when using speech recognition technology for healthcare documentation?



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ANSWER:

Human Intelligence



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

### COMMON MISCONCEPTIONS ABOUT THE BENEFITS OF SPEECH RECOGNITION:

- Back-end Speech Recognition technology...
  - ❖ saves 40% or more in healthcare documentation costs
  - ❖ improves the quality of documentation
  - ❖ eliminates the need for medical transcriptionists
- Front-end Speech Recognition technology is more efficient and therefore more cost-effective than other forms of documentation
- “Point-n-click” template-based EMR technology (with front-end speech commands) negates the need for narrative dictation



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## **SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

### **THE CLAIM:**

Back-end Speech Recognition technology saves 40% or more in healthcare documentation costs.

### **THE FACTS:**

Back-end Speech Recognition technology can save organizations some money...

... but what are the real costs?



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## **SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

### **THE CLAIM:**

Back-end Speech Recognition technology improves the quality of documentation.

### **THE FACTS:**

Back-end Speech Recognition technology can improve the quality of transcription because it can aide a "Medical Transcriptionist" (MT) or help dictators with difficult accents...

... but what factors increase the risk of error when using back-end Speech Recognition?



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### QA WORKSHEET

Document #:	#	#	#	Total Errors by Type	Percentage of Errors by Type
Report Type					
Dictator					
<b>CRITICAL ERRORS AFFECTING PATIENT SAFETY</b>					
Med. Word Misuse (3)					
Omitted Dictation (3)					
PT. ID Error (3)					
Upgrade of Major or Minor (3)					
<b>MAJOR ERRORS AFFECTING DOCUMENT INTEGRITY</b>					
Abuse of Flagging/Blanks (2)					
Med. Word Misspelling (1.5)					
Eng. Word Misspelling (1.5)					
Incorrect Verbiage (1.5)					
Failure to Flag (1.0)					
Protocol Failure (1.0)					
Upgrade of Minor Error (1.5)					
Downgrade of Major (1.5)					
<b>MINOR ERRORS</b>					
Grammar/Formatting (0.5)					
Miscellaneous/Other (0.5)					
Punctuation/Typo (0)					
Downgrade Major/Minor (0.25)					
<b>DICTIONATION FLAWS IMPACTING DOCUMENTATION</b>					
Critical Dictator Effect (0)					
Major Dictator Effect (0)					
Minor Dictator Effect (0)					
Total Error Points				Total Errors ↓	100%
Number of Document Lines					
<b>ACCURACY PERCENTAGE</b>					
<b>PERCENTAGE</b>					



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### ACCURACY PERCENTAGE METHOD

- Multiply Each Error by Point Value...
- Total the Error Points ...
- Subtract Error Points from Lines in Report ...
- Divide by Lines in Report

### PERCENTAGE OF ERROR TYPES METHOD

- Add Total Number of Errors for each Type ...
- Calculate the Total Number of all Errors ...
- Divide the Total of each Error Type ...
- By the Total Number of Errors....
- Subtract from 1.0 ...
- Multiply by 100 for Percentage of Each Error Type to the Whole



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

In a memo to the medical staff at Caldwell Memorial Hospital, Geoffrey Burbridge, M.D., 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."*



## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

### DICTATOR EVALUATION PARAMETERS

Document #:	Point Values
Report Type:	
Dictator:	
<b>VOCAL VARIATIONS</b>	
Dictator's Accent	
Dictator's Speed	
Dictator's Articulation	
Dictator's Volume	
<b>ENVIRONMENTAL EFFECTS</b>	
Background Noise	
Poor Equipment	
Poor Dictation Practices	
<b>ACCURACY DEVIATIONS</b>	
Poor Terminology Use	
Poor Grammar Usage	
Incomplete Information	
Incorrect Instruction or Format	



## **SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

### **THE CLAIM:**

Back-end Speech Recognition technology eliminates the need for medical transcriptionists.

### **THE FACTS:**

Back-end Speech Recognition technology does reduce the number of MTs required to handle the same volume of work that it would take to produce traditional transcription...

... but why should it never be trusted to replace the work of the MT?



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## **SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT**

### **THE CLAIM:**

Front-end Speech Recognition technology is more efficient and therefore more cost-effective than other forms of documentation.

### **THE FACTS:**

Front-end Speech Recognition in certain environments reduces the number of handlers involved in the documentation process...

... but what is the impact on a clinician's time using front-end SR technology and what risks are introduced?



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

### THE CLAIM:

“Point-n-click” template-based EMR technology with front-end speech commands negates the need for narrative dictation.

### THE FACTS:

Working with template-based EMRs with predefined text “macros” does automate the documentation process...

... but if the technology prevents a clinician from including subjective narrative data for patient assessment, what risks are introduced?



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

➤ Human intelligence supports the Risk Management Process for documentation



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- Medical Language Specialists/Medical Transcriptionists are the first line of defense in preventing misinformation from being documented.
- Any healthcare worker who has a hand in patient care must ensure accuracy and accountability.



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- Every MT(MLS), independent contractor, MTSO (medical transcription service organization), hospital, and integrated delivery system should have a process in place to identify potential risk management issues in the documentation process.



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➤ Health Alliance has identified:

Delinquent dictations

Perceived re-dictates

Derogatory statements

Medical contradictions



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## RISK MANAGEMENT

➤ Delinquent dictations:

Health Alliance standard statement.

“Due to the age of this chart this dictation is compiled from the documentation provided in the medical record. Please refer to the medical record for details.”



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

- Any inflammatory, derogatory comments regarding perceived re-dictates are pended to QA for further review.

“HIM lost it; transcription lost it”



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- Derogatory statements regarding other physicians, services, hospitals, departments, Health Alliance or associates are referred to QA for further review/follow-up.

“Ortho service failed to respond when called and does so continually.”



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

- Derogatory statements regarding ethnic groups, race, mimicking patient's behavior, patient or patient's family:
- Statement....“With her history of coming to the emergency department when she is bored I doubt that she really even has any pain.”



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- Medical contradictions:
  - “Right/left”
  - “Male/female”
  - “Sound alike medications”
  - “No one ever spoke with me, but apparently, she was never admitted to the ICU, in spite of my direction to the ED doctor and to the resident.”



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- Health Alliance follow-up procedure:
  1. QA specialist performs initial review/follow-up.
  2. If unable to resolve, escalated to Transcription Director, who then follows up with HIM Managers, Risk Managers, etc.



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

### **MTIA/AHDI/AHIMA Work Group on Automated Speech Recognition (ASR) Best Practices**

Task Force comprised of cross-section of healthcare industry experts (speech rec technology vendors, medical documentation specialists, healthcare providers) to focus on the adoption of both back-end and front-end speech recognition as an evolving method of clinical documentation and to present perspectives on issues impacting or impacted by:

- Implementation
- Productivity
- Efficiency
- Quality
- Economics (Cost, Profit, Compensation)
- Risk Factors



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## SPEECH RECOGNITION: IMPACT ON RISK MANAGEMENT

### MTIA/AHDI/AHIMA Work Group on Automated Speech Recognition Best Practices

- The work group will give special attention to the role and relevance of **Human Intelligence** in any form of documentation.
- The resulting research and collaboration by this work group will be a published white paper providing education concerning these issues, including a unified multi-constituency position regarding **Recommended Business and Operational Practices** for consumer and producer stakeholders.



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Association for Healthcare  
Documentation Integrity



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