

Improving Clinical Documentation Through Use of Speech Recognition Software

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WHAT DOES MEDICAL SPEECH RECOGNITION TECHNOLOGY (MSRT) DO?

Transcribes What the Clinician Dictates

Creates a clinical narrative (the "Patient Story") that records the specifics of THIS patient's concerns & the INDIVIDUALIZED care provided & WHY

Eliminates wasteful typing

It COMPLEMENTS (Doesn't replace) EHR Functions

EHR vs. MSRT FUNCTIONS (#1)

EHRs DO THIS WELL:	MSRT DOES THIS WELL:
Collect, Update & Display Discrete Medical Data	Transcribes Narrative Dictation
Demographic Information	Eliminates clinician typing
Name, address, DOB, etc.	Greatly decreases clicking in EHR
Problem List	A ROS or PE can require 100 clicks!
ADRs	History of Present Illness
Medication List	Details of positive historical items
Immunizations	Symptoms
Past Medical History	Past Medical History
Negative ROS items	Social History
Surgeries	Physical/behavioral/psychological challenges
Hospitalizations	Assessment (Clinician thought processes)
Social History	"Why did I decide to do THESE things for THIS patient?"
Habits: Smoking, Drinking, Drugs	Doctor-speak: A whole different language!
Marital history & children	
Occupation	
Family History	

EHR vs. MSRT FUNCTIONS (#2)

EHRs DO THIS WELL:	MSRT DOES THIS WELL:
Provide Alerts Regarding Potential Dangers	Quickly documents procedures
ADRs	Quickly documents repetitive text, in the clinician's own words.
Drug-Drug Interactions	Negative ROS & PE systems
Abnormal Lab Values	Details of positive PE findings
Personalized Prevention Plan of Service (PPPS) Checklist	Decrease repetitive strain injuries
Provide Reminders of Important Patient Care	Typing, clicking
Immunizations	
Record Diagnostic & Billing Codes	PPPS individualized details for THIS patient
ICD-10, CPT, LOINC, etc.	
Analyze & Report Data	
For IHS & other government agencies	
For Medicare & other insurance companies	
For research	
Provide outcomes data	
To develop standards of care & improve patient outcomes	
INCREASES CLINICIAN PRODUCTIVITY IF the clinician doesn't have to spend all of their time entering data!	INCREASES CLINICIAN PRODUCTIVITY
IMPROVES PATIENT CARE	IMPROVES PATIENT CARE

SPEECH RECOGNITION TECHNOLOGY: FEARS

Fear: EHR Templates "won't work" if I use SRT.

Reality: No effect on EHR functionality

- SRT simply types for you
- No software interface/connection between EHR & SRT software
- EHR cannot "tell" whether the human is typing or the software is

SPEECH RECOGNITION TECHNOLOGY: FEARS

SO...Why the fear that use of SRT will prevent collection of discrete data?

SRT is used in the NARRATIVE (the "Note")
Difficult to collect discrete data here
Little useful discrete data here

Discrete data is best collected in OTHER AREAS of the EHR
Easier to collect
Good summary views
ICD-10 & CPT codes
Problem List
Medication List
Health History

Speech Recognition Technology in EHRs

DEMO

(Non-Medical) SRT Products Available

Microsoft Word

- Not suitable for medical terminology
- Time required to add/train medical terms not cost-effective

Nuance Communications “Gold standard” (25 yrs.)

- Dragon® NaturallySpeaking
 - Time required to add/train medical terms not cost-effective
 - Locks up if used in an EHR
 - Including RPMS-EHR, NextGen, eCW, etc.

MEDICAL SRT Products Available

Desktop-Installed

Nuance Communications

- **Dragon® Medical Enterprise Network Edition (DMENE)**
 - For larger organizations
 - Server-side management tools
 - Desktop installation
 - Unlimited use/machines per user
 - Updates every 2-3 years, @ extra cost
- **Dragon® Medical Practice Edition**
 - Same user-functionality as DMENE
 - Limited to clinics of < 25 MDs
 - New version (DMPE-4 “Version 15”) just released
 - Faster, More accurate
 - DMPE-1 (Version 11)? Should upgrade!

M*Modal

1. Medical speech recognition integrated with several specific EHRs only (not RPMS)

"Cloud"-Based MSRT PRODUCTS

- Monthly Subscription
- Included updates & support
- No installation

Nuance Communications "Dragon Medical One"

- Very experienced company
- Accuracy/speed very good x 2 years
- Must sign 2-3 year contract

nVog "SayIt"

- Not new to cloud-based MSRT (10 years)
- Accuracy/speed very good x 2 years
- Half the cost of Dragon Medical One
- No contracts

M*Modal "Fluency Direct"

- Released 1 year ago – not time-tested

MSRT PRODUCTS – Common Points

All Medical SRT applications:

- Have multiple specialty vocabularies
- Have special speech engines that examine medical context (not just individual words) for increased accuracy
- One license / one voice requirement

All Medical SRT applications need:

- Professional training
 - 99% of self-taught clinicians are only "scratching the surface" of SRT capabilities
- This isn't Turbo Tax!

MSRT PRODUCTS – Common Points (#2)

All Cloud-Based MSRT applications:

- Wave of the future
- May replace desktop products
- Require a good Internet connection
- None can be used if Internet lost!

CONCLUSION

EHR + MSRT = Win-Win

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