Implementation and Utilization of Voice Recognition Software
A Study in Patience, Persistence, and Payoff

Michael A. Rauh, MD
UB ORTHOPAEDICS & SPORTS MEDICINE
Clinical Assistant Professor of Orthopaedic Surgery
State University of New York at Buffalo
Saturday June 16, 2012
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My Disclosures
http://www3.aaos.org/education/disclosure/search/disclosure_search.cfm

- Stryker
- Nuance
- 3B
- Stryker
- Nuance
- Clinical Orthopaedics and Related Research (CORR)
- American Journal of Sports Medicine (AJSM)
- ORTHOPEDICS and SLACK Incorporated
- Wolters Kluwer Health – Lippincott Williams & Wilkins

Implementation and Utilization of Voice Recognition Software

- Introduction
- True “Cost” of Transcription
- “Cost” of Voice Recognition
- How to Start?
- Effect on Work Flow and Other Uses for VR.
- “Cost Effectiveness” of Voice Recognition
- Conclusion / Demonstration / Discussion
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State University of New York at Buffalo
School of Medicine and Biomedical Sciences

UB ORTHOPAEDICS & SPORTS MEDICINE

- Sports Medicine (7)
- Shoulder & Elbow (2)
- Foot & Ankle (3)
- Adult Reconstruction (4)
- Pediatrics (3)
- Trauma (4)
- Tumor (2)
- Spine (3)
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By December 2007.....

Quickly Introduced to the Unbelievable “Cost” of Running a Practice

Started practice... August 2007
The Monthly Spreadsheet

First 5 Months: A Partial List of Expenses

What Can I Control??

- Dean / Chair Tax? NO
- Malpractice Insurance? NO
- Lease / Rent? NO
- Office Supplies? Sort of.
- Direct Staff? Yes, but...
- Transcription? Absolutely.
So I asked the Question...

Boy was I surprised!!

It was a RUDE awakening!!

Note #1
Note #2
Note #3
April 8, 2006

Patient Name: [Redacted]

1. History and Physical
   1.1 Chief Complaint: Left knee pain.

2. Examination
   2.1 Right Knee: No effusion, no warmth, no warmth.
   2.2 Left Knee: Tender over the patellar tendon, increased warmth with palpation.

3. Radiographs
   3.1 AP and lateral views of the right and left knees show no significant findings.

4. Conclusion
   4.1 Likely diagnosis: Patellar tendinitis.
   4.2 Treatment plan: Physical therapy and rest.

5. Follow-up
   5.1 Patient to be seen in 1 week for further evaluation.

6. Signature
   6.1 [Redacted]

Date: [Redacted]
My Transcriptionist “Taught” me about ….

- **Costs Associated with Transcription:**
  - She did the transcription
  - She would create/edit my templates
  - She did the editing of my notes so they “made sense”
  - She would “route” them to me for approval
  - I didn’t have to “think about it”
    - EXACTLY!!!
  - I had NOT THOUGHT about it!!!!
My Transcriptionist Also Said…

- “You talk too much…”
- “Just think of how much time I am saving you…”
- “It was the agreed on contract price / line…”
- “Your partners don’t seem to mind…”
- “But I have employees to pay”
- “You focus on surgery…I’ll take care of the dictation…”

I Said…

You’re Fired!!

I started to look around…

- Other transcriptionists were willing to work
  - insert “spiels and addendums” as a “key stroke”…
  - Not as a line / character charge
- Re-negotiated the “contract”
  - Partners didn’t know they were paying so much
  - They “didn’t even think about it”

- I was already saving $$ and didn’t do much but start to think
Other options??

- Tried in College
- Didn't work well…
- Very Slow
  - Computer and processor
  - RAM
- Could type faster myself!
  Not an option…

Anything New??

- Widely used voice recognition software
- “Dragon-Naturally Speaking”®
- Nuance
- May be an option…

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“So…What’s it Cost?”

“What’s it Cost?”

• Software / Site License  $2000 - $3000

• Noise Canceling Microphone  $300 - $400
“What’s it Cost?”

• Software / Site License  $2000 - $3000
• Noise Canceling Microphone  $300 - $400
• Bluetooth Headset  $150 - $250

• Depends on provider preferences

• Computer Upgrade  $2000 – new
  - May not be necessary
  - XP Pro
  - 2.27 GHz processor
  - 3.0 GB of RAM

• “Voice Profile Server”  $2000
“What’s it Cost?”

- **Software / Site License** $2000 - $3000
- **Noise Canceling Microphone** $300 - $400
- **Bluetooth Headset** $150 - $250
- **Computer Upgrade** $2000 – new
- **“Voice Profile Server”** $2000 (total)

- Do you work at multiple sites
- Benefit is that your “voice profile” can travel with you
- Any computer...anywhere...
- Speed of computer may affect the speed of the transcription
- Cost depends on your IT personnel and size / speed of server / and number of partners to share in cost.

“Which Systems Does it Work with?“

- **Any** software with a cursor
- PC
- MAC
- Local Servers
- “Cloud”
Introduction

True “Cost” of Transcription

“Cost” of Voice Recognition

How to Start?

Effect on Work Flow and Other Uses for VR.

“Cost Effectiveness” of Voice Recognition

Conclusion / Demonstration / Discussion
How to Start?

• Install the Software 5 minutes

How to Start?

• Install the Software 5 minutes
• Training 10 minutes
  - Involves checking the microphone / volume
  - Reading aloud with "pre-written scripts"
  - Computer “learns” your voice / intonation / preferences through "WORD ASSOCIATIONS"
    - Deep voice ?
    - High voice ?
    - Accents ?
  Doesn’t matter !!!

How to Start?

• Audio Setup 2 minutes
The computer needs to listen to you read some text aloud for about 15 seconds. Make sure your microphone is plugged in and positioned correctly, then click Start Volume Check.

For assistance in connecting or positioning your microphone, click Help.

In this step the computer listens to the sound of your voice and adjusts the volume setting of your microphone. If the computer has finished adjusting the volume, it beeps to signal that the process is complete. If you reach the end of this test but you have not heard a beep, start reading the text again from the beginning. You should only have to read the text ten to fifteen seconds.

The computer will now test the quality of your sound system and microphone.

Click Start Quality Check and then begin reading the following text aloud:

You have successfully finished audio setup. Click the Finish button to proceed.
Ready for use!!!
Can I customize it for my needs??

YES!!
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Are we Ready for the Office?

- “Dragon Time” 1 – 3 months
  - Initially
    - Build in extra time into day
    - Dragon “visit”
  - As time goes on…
    - Much LESS time devoted to Voice Recognition
    - Better notes!
    - Documentation which better reflects your work
    - Accurate Billing based on documentation

Are we Ready for the Office?

- “Invest Work Now… Pay Dividends Later”
  - Dictating Notes
    - At first, you are dictating everything
    - Takes some extra time at first
    - Remember… “WORD ASSOCIATIONS”
    - Getting used to the buttons / windows
Are we Ready for the Office?

- “Invest Work Now... Pay Dividends Later”
- Dictating Notes
  - “Hey... I just said the same thing as before”
  - A spiel
  - An examination
  - A discussion

Are we Ready for the Office?

- Don’t “Say the Same Thing Twice”!!
- Turn that “note” into a “shortcut”
  - Pays dividends next time you want to use the same phrase, sentence, paragraph, note...
  - Use your mouse and hilitc the text
  - Say... “Make that a Shortcut”

Give it a name you will remember

Text can be cut/paste into the “Content” box as well.
Next time you are dictating... just say
“INSERT 'NAME'...”
Effect on Work Flow?

- Voice Commands

- SAY...
  - TO...
  - Cutting / Pasting / Deleting Text
  - Copy That
  - Copy selected text
  - Cut That
  - Cut selected text
  - Paste That
  - Paste cut or copied text
  - Scratch That
  - Delete the last thing you said

- SAY...
  - TO...
  - Inserting Basic Punctuation
  - Period or Full stop
  - Comma
  - Question Mark
  - Exclamation point
  - Colon
  - Semicolon
  - Hyphen
  - Dash
  - Open quote
  - Close quote
  - Open parenthesis
  - Close parenthesis
Effect on Work Flow?

• Voice Commands

Other “Great” Uses for VR Software

• E-mail
  - Send [an] email to <names>
  - Send [an] email about <subject>
  - Find an email about <text>

• Personal Letters
• Research

• Desktop Commands
  - Start <application name>
  - Click Start
  - Shut down computer
  - Search [the] computer for <words>
  - Search [the] (documents/files) for <words>

• Web Searching
  - Search PubMed for <words>
  - Search Google for <words>
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“Cost Effectiveness” of Voice Recognition

- Initially a Decrease in Productivity
- Rapid Increase in Productivity
- Decreased Turn-Around-Time (TAT)
  - Increased Referrals / Happy PMD’s
- Better Documentation
- Structured data for efficient coding / billing
- Rapid ROI – “Less than 6 months”

Monthly Transcription Cost and Patient Visits

<table>
<thead>
<tr>
<th>Year</th>
<th>Transcription Cost</th>
<th>Patient Visits/Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1298.00</td>
<td>285.00</td>
</tr>
<tr>
<td>2008</td>
<td>1398.00</td>
<td>295.00</td>
</tr>
<tr>
<td>2009</td>
<td>1498.00</td>
<td>305.00</td>
</tr>
<tr>
<td>2010</td>
<td>1598.00</td>
<td>315.00</td>
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Started Dragon in May 2008
Transcription Cost / Patient

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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</thead>
<tbody>
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<td>Cost</td>
<td>12.53</td>
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<td>11.50</td>
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<tr>
<td>Total</td>
<td>40.73</td>
<td>66.26</td>
<td>88.98</td>
<td>14.01</td>
</tr>
</tbody>
</table>

Others caught on…

But not everyone…

Non-Voice Recognition Users

*My secretary is my transcriptionist, and …
I like my secretary
*I like tape dictaphones.
*I just don’t want to change… “#&@ it!!”
*I don’t have to pay for transcription
Tried Voice Recognition - Gave Up!

- Took too much time out of my day
- Spent less than 1 month trying
- I can’t type
- I don’t like being tethered to my PC
- Bluetooth option?

Voice Recognition LOVERS!!

- I don’t understand why everyone isn’t using it??
- “Show me the money!!”
- I get home earlier and bring less home at night
- It goes right to my bottom line!!

Savings Champion!!
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Conclusion / Discussion

- Don’t expect it to “reap dividends” from day one
- It takes time to learn the system; and time to see how it will fit into your own “work-flow”
- It is flexible
- It can be for EVERY note

Don’t Fear the DRAGON….

Fear your TRANSCRIPTIONIST…..
Demonstration

Dragon Software
MEDENT

Thank You For Your Time And Attention.