

I hear a voice: using speech recognition systems in community practice

By John J. Fried

A computer program that can turn the specialized speech of doctors into written text is proving to be a valuable practice tool.

Soaking up some sun on a recent beach vacation, Tom Hodgkiss, MD was determined to keep up with his work load. So he began dictating. Dr. Hodgkiss, an interventional and diagnostic radiologist with the West Clinic in Memphis, TN, wasn't dic-

tating into a tape he would later drop on the desk of a harried transcriptionist back at the office.

Rather, using a microphone, he was talking into his laptop computer, his words leaping across a wireless Internet connection into the West Clinic's network. There, those words were being translated into neatly typed documents immediately accessible to his partners toiling away back home.

The translation was being done by Dragon NaturallySpeaking Medical, a voice-recognition program capable of turning speech—specifically the specialized speech of doctors—into written text. "It's an incredibly elegant program," Dr. Hodgkiss says of NaturallySpeaking. "I am amazed that the first time I use a complex medical term, it gets it right and seems to be more accurate than transcription."

Do physicians, already filled with angst over electronic medical records and other technological intrusions into their offices, have to face yet another piece of digital voodoo, in this case voice-recognition programs? In short, yes—and in fact they already are. According to the 2005 Leadership Survey conducted by the Healthcare Information and Management Systems Society (HIMSS), some 59% of the doctors it surveyed said they planned on switching to speech-recognition technology. A year earlier, only 53% of the doctors surveyed told HIMSS that they were interested in voice recognition programs such as NaturallySpeaking and IBM's Via Voice, among others.

Why should I?

There are ample reasons to consider a voice-recognition program, not the least of which is the effect it can have on the economics of a small community practice. Conventional transcription services can cost upwards of \$12,000–\$18,000 a year per doctor. That makes a program such as NaturallySpeaking, priced at under \$1,000 for a single copy, a great bargain.

Says Dr. David Stein, a neurologist working in a solo practice in San Diego, California, "To survive in a single practice here you have to reduce your overhead as much as possible. I'm saving at least \$10,000 a year in transcription costs by using NaturallySpeaking. That's a modest estimate."

In many specialty practices, doctors use their electronic medical record system to, among other things, create the reports that are sent to referring physicians. But patient reports are not an EMR's strong suite, says Dr. Stein.

"EMRs are designed for the billing side of a practice and they leave little room for discussion," he says. "But it's important for oncologists or neurologists to convey what they are thinking. By using a program such as NaturallySpeaking you can dictate a discussion and give a consultation in the old sense of the word."

Most important, a report created with a voice-recognition program gets to a referring physician quickly. It can take 5–7 days for a dictated report to be transcribed and then reach a refer-

Resources

Finding microphones online

eMicrophones, Inc.

- www.emicrophone.com
- 914-556-8286

Finding a vendor to help with NaturallySpeaking

Go to www.nuance.com and then click on the Partners tab. In the next page that opens, click on the link "Locate a Dragon NaturallySpeaking Solutions Provider Partner."

For information about other voice-recognition programs

Nuance

- www.nuance.com
- 781-565-5000

Capterra

- www.capterra.com/landing/wirexspch
- 703-994-4500

EMR Consultant

- <http://emrconsultant.com/>
- 888-519-3100

Softnet Systems, Inc.

- www.pcspeak.com
- 602-375-0998

ring doctor, but a report created with a voice-recognition program “can go out the minute after I have seen a patient,” Dr. Stein says.

The time is now

The time for dipping into voice recognition may also be ripe now because advances in voice-recognition technology have greatly increased the utility of the programs. When he first used an early version of NaturallySpeaking 10 years ago, the West Clinic’s Dr. Hodgkiss says he found that it was far from accurate in interpreting what he was saying. But the most recent version of the program got 90% of his dictation right the first day, and the accuracy improved the more he used it. NaturallySpeaking is programmed to recognize the vocabularies of 60 different medical specialties, including the 80,000 words that pepper a radiologist’s speech and the 160,000 words most oncologists use in dictating their reports.

However, it would be misleading to imply that voice-recognition programs are the easiest-to-use medical tools since the tongue depressor. Publishers of these programs boast that you can train them to create nearly

error-free reports by just reading into the computer for 7 minutes or so a prepared text supplied as part of the installation process. That is probably a bit optimistic. (Witness those voice-recognition programs that businesses use to answer their telephones; they often tell you they haven’t understood what you are saying.)

So, in order to get to a high degree of accuracy quickly, each person who uses NaturallySpeaking should plan on training the program for at least an hour, if not two or more. One way to do that is to read to it from one or more of the several text passages that come with the program.

Another technique is to jump in and start dictating reports. Just expect to spend some time correcting the first few documents you create. By making your first few reports the sacrificial lambs to your training efforts, you will be introducing the program to your style of enunciating the terms you use. After a try or two, “myelogenous leukemia” will no longer emerge as “myelo Jean he is leukemia.” Dr. Stein brags that NaturallySpeaking got it right for him on his first try.

Here are some other recommendations from Dr. Stein who suggests you

take these steps to get the most out of your voice-recognition software:

Buy a top-of-the line microphone. “The mike that comes with Dragon NaturallySpeaking is not particularly good,” says Dr. Stein. “Upgrading to a better one will help.”

Better yet, consider a wireless microphone. This device will unchain you from the PC and stop you from reading the screen while dictating, a habit that can actually interfere with good dictation, according to Dr. Stein.

Buy a state-of-the-art computer with a fast processor and lots of memory. At the very least, upgrade your existing PC by installing more random access memory. “If you are running NaturallySpeaking and Word at the same time,” he says, “you need at least 1 gigabyte of memory.”

Set up macros and other tools to automate some functions such as the insertion of boilerplate paragraphs into reports. If you buy your program from a specialized vendor, rather than your corner computer store, you can get help setting up these tools. “To get a really productive workflow takes a bit of experience,” says Dr. Stein. “A vendor will be glad to help on the back end.”