

## Text-entry solutions: which 'type' is right for you?

*Voice recognition, online dictation, and other technologies may increase your practice's efficiency. Our expert compares the options.*

### **John Luo, MD**

*Assistant clinical professor and director of psychiatric informatics Department of psychiatry University of California-Davis, Sacramento*

If you cannot type—or don't like to—read on.

Text-entry advances offer alternatives to traditional keystroking. From voice recognition to online dictation, these options promise increased efficiency and relief from typing-related repetitive stress injuries.

### **THE TRUTH ABOUT TYPING**

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Few people know that the original typewriter keyboard layout—known as QWERTY, for the row of keys on the upper left-hand side—was designed to decrease typing speed so that the mechanical typewriter's keys would not jam.<sup>1</sup> More recently designed keyboard layouts, such as DVORAK and IDEAL, are reportedly more efficient but are not widely used. It would take months to retrain a typist to work with either keyboard.

Dictation is a well-established alternative to typing, but if the transcriber is not 100% accurate, much time is wasted correcting mistakes, returning the document, and proofreading the corrections.

### **VOICE RECOGNITION**

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Voice recognition technology has been touted as the successor to dictation. With increasing computer power and more sophisticated algorithms to improve recognition, many programs<sup>2</sup> can record continuous speech onto a document with approximately 95% accuracy.

Using voice recognition software and hardware to dictate text can save worlds of time compared with typing or writing by hand. But beware: accents and background noise often confound voice-based systems.

What's more, a voice-recognition package that is suited to medical practice may be considerably more expensive than an entry-level model. Entry-level programs such as ScanSoft Dragon [Naturally Speaking](#) and IBM [ViaVoice](#) start at less than \$100 each, but the medical version of ScanSoft is \$1,000. The [Trigram Psychiatry Specialty Module](#), at \$300, may be an option. ViaVoice users can get a medical vocabulary module for an additional \$142.

### **OTHER TEXT-ENTRY SOLUTIONS**

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**Internet-based dictation** is a possible alternative to voice recognition or traditional dictation. Dictaphone's [Physician Workstation](#), which will reach the market in March, will allow the user to dictate with a specialized microphone linked to the computer or offsite by calling a toll-free telephone number. The computer then sends the voice data securely via the Internet to off-site transcriptionists. The physician logs into the transcript and makes corrections online via a Web browser. The user electronically signs the note to finalize it, and it is automatically delivered to the desired locations.

For a nominal investment in hardware, Physician Workstation can significantly simplify and speed up the transcription process. Dictaphone also provides 24-7 support and maintenance for these services, which cost \$86 a month for 500 minutes. The

setup has its drawbacks: Dictaphone provides the secure infrastructure and support, but transcription is a separate contracted service at 15.5 cents per line. However, you can select another transcription service to receive your voice files, or you can use Dictaphone's new voice recognition software (also available in March).

Similarly, other online transcription services, such as [HealthScribes](#) and [Kinexhc](#), allow mobile users to dictate via a telephone, dedicated device, or personal digital assistant (PDA). HealthScribes charges 12.5 cents per line for PDA dictation, plus \$45 a month for the software contract. In contrast, Dictaphone offers more services to handle the volume and connectivity of electronic medical records.

Many PDAs are equipped to work like tape recorders: The user talks into a receiver, creates a digital voice file, and sends the file electronically to the transcription/voice recognition service. For example, [HealthcareOne](#) provides a solution for the Palm OS based-Handera PDA, and [ProVox](#) utilizes Pocket PC OS-based handhelds to deliver dictation to TalkNotes.

In addition to PDA-based entry, TalkNotes can enter information into customized forms. Voice command shortcuts, or macros, can be created to dictate commonly used phrases or norms. TalkNotes goes one step further by automatically pulling patient demographic data into your customized macro. The basic package for an individual user costs \$3,900, which includes the desktop and handheld software and creation of specialized dictionaries and voice files.

Although these solutions are costly, they minimize hardware and software investments as well as dependency on a local transcription service. Not to be overlooked is the decreased risk of repetitive stress injury from typing.

**Computer-generated documents.** The [ICANotes](#) system creates medical notes with just a few clicks to reduce text entry. By selecting key words in headings (e.g., "chief complaint"), the program generates approximate "template text" that comprises 80% of the text necessary. Information from previous notes is also brought forward to reduce typing. While generating the note, the program will also determine the appropriate E & M (evaluation and management) and psychotherapy codes based on the entries made.

A basic ICANotes system that creates initial history and assessment reports, progress notes, discharge summaries, and psychotherapy notes can be purchased for \$550. Additional modules to produce prescriptions and other notes cost extra. ICANotes will cut out a lot of typing, although the generated text will have a simplistic and repetitive sentence structure.

**Handwriting programs.** Although handwriting is obviously much slower than other modes of text entry, it is both silent and within your control, making it perfect for taking notes during medical meetings or sessions with patients.

Seiko's [Smartpad2 System](#) for \$150 captures notes and drawings directly into your personal or notebook computer or PDA. This information exists only digitally as a picture, however.

The newly available [io](#) personal digital pen from Logitech, at \$200, offers another cost-effective handwriting alternative. Instead of a pad underneath to capture pen strokes, a tiny camera in the system captures your pen movements, which are transferred to the computer via a cradle. The drawback is that handwriting recognition is limited.

By using Advanced Recognition Technology's [smARTwriter](#), printed handwriting can be converted into electronic text, which can be then inserted into any document. The program is affordable (\$70) but carries significant drawbacks: Printing may be slow, and handwriting recognition is not 100 % accurate.

The [Tablet PC](#) presents a possible all-in-one handwriting solution. New to the market, Tablet PC offers built-in handwriting recognition and conversion, voice recognition, and other rich features. Microsoft adapted the Windows XP operating system for the device, which is manufactured by such vendors as Toshiba, Acer, and Hewlett-Packard. It comes in either a slate or clamshell design; the latter style features an integrated keyboard.

Tablet PCs range in cost from \$1,500 to \$2,500, and are touted to be as easy to use as Microsoft Windows XP with additional practical features. This is a new product, however, and future versions will offer improved accuracy, hardiness, and longevity.

*If you have any questions about these methods or comments about Psyber Psychiatry, [click here](#) to contact Dr. Luo or send*

an e-mail to [Current.Psychiatry@dowdenhealth.com](mailto:Current.Psychiatry@dowdenhealth.com).

## **Disclosure:**

Dr. Luo reports no financial relationship with any company whose products are mentioned in this article. The opinions expressed by Dr. Luo in this column are his own and do not necessarily reflect those of CURRENT PSYCHIATRY.

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