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Medical Information Technology

Low Cost IT Solutions For Your Medical Office: Tips From a Practicing Physician

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During the last ten years I have visited numerous physicians offices and assisted them in the implementation of electronic medical record systems (EMRs). Most of my fellow colleagues do understand the rationale to implement EMRs but hesitate taking the leap towards such a complete information technology solution. Most of them cite the significant expense in time and money and prefer to continue using paper and pencil to document their patient encounters. For those, this article may provide some assistance and guidance on how to incrementally introduce such new technologies into their practice. Many physicians still consider the keyboard as a major obstacle limiting their speed for data entry. Well, there are alternatives. I use a hybrid solutions comprised of a Tablet PC (Toshiba Portege M200) and a voice recognition software (Dragon Naturally Speaking Preferred Version 10).

A Tablet PC is a notebook or slate-shaped mobile computer equipped with a touchscreen or graphics tablet/screen hybrid technology, which allows the user to operate the computer with a stylus or digital pen, or a fingertip, instead of a keyboard or mouse. The form factor offers a more mobile way to interact with a computer.

If you do not have an EMR yet you can use a word processing software such as Microsoft Word or OpenOffice, create your patient encounter template and add the relevant patient information either in the form of a drop-down menu, or use macros to enter complete phrases or sentences. I use templates within my EMR (Welford ChartNotes) and utilize the digital pen to activate drop-down menus.

In addition, I have installed Dragon Naturally Speaking Preferred Version 10, which allows me to dictate directly into the encounter template. The voice recognition software has been improved to the point that very little voice training is required to achieve > 98 % recognition accuracy. Unfortunately, Nuance Communications, the manufacturer of Dragon software, has deactivated the software for use with most commercially available EMRs requiring the purchase of the expensive medical version (~$1.500).

The medical version includes medical vocabularies covering nearly 80 medical specialties and subspecialties. Using Dragon Medical 10, physicians dictate in real-time into their EMR in their own words - letting them instantly review, sign, and make their notes available for other clinicians.

It is also possible to buy the Preferred Version (~$400) and to install third-party medical vocabulary software, or to train the system to recognize the most commonly terms used in your practice. I have chosen the latter and use Dragon with a wireless Bluetooth microphone and can dictate at almost the same speed as I normally speak.

Scanning of medical records provides another opportunity to streamline your practice. The scanning of the entire medical record may provide a safe backup of your patient data but it can be a very costly endeavor. Personally, I do not endorse such a solution but use targeted scanning to reduce the paper clutter caused by faxed or mailed patient records. I have purchased a Fujitsu Scan Snap S 510 (< $400), scan all mailed consultation and diagnostic testing results into my computer and save them as PDF files. These files I hyperlink within my EMR and can recall and review information as needed. The scanning process is fast and I can also use text-recognition software to convert the scanned document into a searchable digital record.

The above-mentioned tools are not a replacement for EMRs but can help you to integrate medical information technology solutions into your practice.

For more information please feel free to contact me.

Disclosure: The author is a computer consultant, founder and managing partner of VirtualMed, LLC.

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