

## TABLET VS. DESKTOP COMPUTER

Practices planning to transition to electronic medical records need to also consider the appropriate hardware solutions that will best fit their needs. This article will focus on hardware for care team member (provider/physician, or "CTM") data entry during patient visits - specifically, laptop or tablet versus a desktop computer. Office considerations for this decision include the interplay of the patient experience, work-flow, office and exam room design, costs, performance and ergonomics.

Care team members value a personal experience for their patients. They want to maintain eye contact during patient interaction and while they document the purpose of the visit. The laptop or tablet can have the familiar feel of holding a paper chart and CTMs can therefore easily visualize how they will chart and interact with their patient. It is more difficult, however, to imagine a fixed desktop computer in the room. Yet, a well placed desktop monitor can enhance the patient experience and provide an opportunity to engage the patient in their care. Together, CTM and patient can view certain parts of the chart, lab results, images, consultant reports or Internet web pages. Even the smallest of exam rooms can accommodate a monitor and keyboard - wall shelves, swivel arms and other space-saving attachments can be utilized to maximize available space and/or to keep the unit out of reach of exploring patients. If choosing to keep a fixed computer in the room, work-flow must include steps for secure log in and log out each time a new CTM enters or exits the room.

If using a laptop, security is dependent upon the unit remaining with the user at all times. The CTM carries it from room to room. This makes weight and size an important factor then in laptop selection, as size of the portable device correlates directly to the size of the screen. The smaller the screen space, the less data that can appear on the screen at any one time without extra scrolling and clicks. Small screen size can also create eye fatigue by the end of the day. I encourage CTMs to test drive the system they want to use on the equipment they are considering. Count the number of clicks or scrolls to see all the information on different screen sizes. The weight of a laptop also goes up with extended batteries that can make it through a six or eight hour work day before requiring additional charging. Laptops add an extra work-flow step of needing to periodically charge. Some practices purchase a "spare" laptop to use while another charges.

Some CTMs will still prefer to input their documentation after the visit and will not need to have hardware in the room. If space allows outside exam rooms, hallway stations can house computers for data entry or the providers can document at their own desks.

The cost comparisons become slightly more complicated for desktops vs. laptops, especially when considering central processing units (CPUs) and random access memory (RAM) - two important factors influencing the speed of a computer and its ability to run electronic medical record programs. Comparable CPUs and RAM will generally cost less in a desktop computer than in a laptop. Desktops are typically much less expensive and offer a variety of monitor options which allows for more choice when it comes to screen size. Desktops have the advantage also of being more easily "upgraded" than a laptop. Each year, computers get faster and memory becomes cheaper to add on. Dual monitors are becoming more popular as well, allowing the CTM to keep multiple screens open simultaneously for easier viewing. While this can be done with a laptop, the added work-flow steps would make this prohibitive as a CTM moves from room to room.

Some large practices utilize their EMR systems and the hardware kept in each room in order to track the location of a CTM at any given point during the day. This option would not be available if using mobile laptops. The connection to the server differs for laptops versus desktops as well. Both can use a wireless network or be "plugged" into or hardwired to the server. With a fixed desktop computer, the unit remains plugged in at all times. If using a laptop, the user would need to perform the added step in each room of plugging in. However, not every office can accommodate wireless transmission or may require extra equipment to do so. Wireless routers add one more piece of hardware to purchase, maintain, and support. Hard-wiring, on the other hand, is one cost with low three year maintenance costs.

Accidents happen. There are very rugged laptops on the market that can handle a "drop". Of course these are available at a cost. Practices may want to consider purchasing "accident" insurance on their mobile devices in the event such an accident occurs.

The decision of desktop versus laptop does not have to be made ahead of time either. There is no harm in purchasing both and trying them over a period of a month in the actual work setting to get the most true feel of which method the CTMs prefer.



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