

# Hardware Comparison

*This tool was originally developed by the American Academy of Family Physicians.*

## Desktops

### The Basics:

- A desktop computer usually has a standard configuration consisting of a CPU (the "brain box"), monitor, keyboard and mouse.
- It is stationary – that is, it resides in one location and cannot be moved from room to room.
- It can stand alone or work with any of a variety of network arrangements.

### Advantages:

- Desktops are low-cost and available from a wide variety of vendors.
- Because desktop PCs are standardized, it is relatively easy and inexpensive to find spare parts and support or to replace a machine.
- Desktops will run just about any software you need.
- Additional devices such as microphones, speakers and headsets are readily available at low cost.

### Disadvantages:

- Because it's stationary, you need to buy a desktop PC for each room in which you need access to your EHR software.
- Desktops typically have a larger footprint – that is, they take up more space than a laptop or tablet PC. While flat screen monitors and tower units save actual desktop space, the standard desktop computer requires more room than either a laptop or tablet PC.
- You must purchase additional equipment to take full advantage of voice recognition and/or handwriting recognition programs.

### What Your Peers Have to Say:

“Have had wired computers [desktops] in the exam room since 1998 and think it is the best way. I find it less hassle than carrying a computer around all day, worrying about batteries running out or losing wireless connectivity or dropping the computers. The computers are much cheaper both to buy initially and fix if something does happen. Tried a tablet but did not like it all. Never had a problem with children or adults interfering with the computer in the examining room and if you log out when you leave, HIPAA is not an issue.”

— Keith Stafford, MD, Greenville, SC

## Laptops

**The Basics:** A laptop is a fully functioning computer that is small enough to be portable. Laptops can take advantage of wireless as well as traditional networks. A laptop can easily serve as a desktop machine and can connect via a docking station to a larger monitor and a standard keyboard.

### Advantages:

- A laptop has a smaller footprint and can easily be turned to allow patients to view information on the screen.
- A laptop is less obtrusive during patient interviews.
- Most have fairly long battery life and/or an A/C adaptor.
- Laptops use standard PC inputs such as keyboard and mouse and/or touchpad.

### Disadvantages:

- Although laptops are portable, they can be heavy to carry.
- Repairs and maintenance tend to be more expensive because laptops use non-standard or proprietary parts. You may have to send a laptop offsite for diagnosis and repair.

### What Your Peers Have to Say:

“We work wirelessly with laptops. All [prescriptions] print from one central printer right outside the exam rooms. Benefits of laptop:

1. Can open the note and chart before entering the room and bring up appropriate templates. Can enter the room already knowing what HM is late and what the purpose of the visit is.
2. Can close the note right outside the room if you want to go ahead and have the patient leave before finishing a note.
3. Can see with bifocals - no neck strain.
4. Can have all my personal settings and programs handy all the time – PDR, web links, hospital links, etc.
5. Can look at patient easily over the top of the laptop and can easily show patients what I'm doing.
6. Touchpad is always in the same place in relation to keys – easy to switch from it to typing or tabbing without looking. I like having a full-size keyboard.

“I'm hooked on my laptop and am so accustomed to carrying it around that I don't even notice even though it is Dell's heaviest one.”

— Sue Andrews, MD, Murfreesboro, TN

## Tablet PCs

**The Basics:** There are two main types of tablet PCs: a slate tablet PC, which is a tablet with no attached keyboard (although one can be added), and a convertible tablet PC, which is basically a laptop computer with a screen that can swivel and fold onto the keyboard to create the tablet.

### Advantages:

- Tablets are truly portable and lightweight.
- It is as powerful as a PC, but it doesn't require a keyboard. Instead, you add information by writing on the screen (or "tablet") with a digital pen or stylus, much like you do in a paper chart.
- Handwriting recognition software developed for tablet PCs is excellent, even for very poor handwriting.
- Tablet PCs have integrated dictation capability with voice recognition software that transcribes directly into the patient record.

### Disadvantages:

- Writing with a stylus takes getting used to – there is a longer learning curve in adapting to a new way of using a computer.
- Handwriting recognition dictionaries have not yet fully integrated medical terminology and acronyms, requiring more correction.
- There is not as much standardized software yet available for tablets.
- Screens are easily scratched and can become unusable without screen protectors purchased at additional cost.

### What Your Peers Have to Say:

"I have been using a tablet in the room with my OB patients for the past two years. I wouldn't trade for it. It has three methods of entering data on the screen.

"The first method is through tapping on a screen-based keyboard with the stylus (slow but very accurate). The second is through straight handwriting recognition. I have relatively poor handwriting, but it is amazing how accurate and fast this is! The only thing that seems to trip it up is some abbreviations, acronyms or words that it cannot find in the dictionary. The third option is a letter-by-letter handwriting recognition panel that is slower but extremely accurate.

"We've had no downtime. The wireless connection works well. The battery life is good (I plug it into the docking cradle between OB patients). We have used laptops and desktops in the rooms and the tablet works best by far. As we look to add a full EMR, we hope to use a tablet-based system."

— G. Jeffrey Young, MD, FAAFP, Levelland, TX