

Healthcare Tablets: Choosing the Right Solution

By Greg Davidson, senior business development manager for the healthcare industry, Panasonic Toughbook

The topic of tablet computers in healthcare has received an enormous amount of attention since the introduction of Apple's iPad and tablets using Windows 7. While demand for mobile devices in the healthcare market is growing, there is still no one perfect solution for healthcare users – and there never will be. Radiologists have different needs than surgeons and nurses have different needs than phlebotomists. If your goal is to improve patient safety and workflow, then you'll need to find devices that work best for each user.

This sudden swell of interest in tablets merits a discussion of issues healthcare organizations should consider when looking for a tablet of any kind. Before deploying a tablet, you must consider a number of factors, including ergonomics, connectivity, durability, security, vendor experience, service and support, functionality and the ability to repeatedly sanitize the device. These will all impact the success of the deployment. The worst thing you can do is just look at price!

Ergonomics

Ergonomics is a critical consideration for a tablet. If a clinician is going to carry a device all day, it needs to be lightweight and easy to hold for long periods of time. Years of working with healthcare professionals resulted in Panasonic designing a "hand-free" ergonomic strap and dome hand support system that cradles the hand for comfortable long-term use. You can see this technology in many of our devices. When considering a tablet, I encourage you to look at the ergonomics of the design and to have clinicians consider this element as part of the testing process.

Connectivity

Tablets are designed to facilitate mobility, but the true benefits of mobility can only be achieved with connectivity. Most healthcare facilities gain connectivity via Wi-Fi, but home health workers may require mobile broadband. When looking at a tablet's connectivity, consider its ability to capture a signal in fringe areas. Most devices will have a clear signal near a router or cell tower, but how strong is the connection as you move them away from an access point? Wireless testing is simple and often overlooked. It's common to blame the wireless network when you can't get a signal, but often it's the device.

Durability

In Panasonic's experience, healthcare customers are some of the most demanding. This highly mobile and dynamic work environment often leads to dropped devices. As a result, durability is a chief consideration for tablets. Fragility is not an option when your work is mission critical.

For those considering the new iPad, I'd point to a recent article from *PC World*. The title — iPad Stress Tests: Buy a Case and Don't Drop It — says it all. At the end of the day, if you can't rely on a computer to operate after an inevitable drop or spill, then your ability to transform your workflow is significantly reduced. Be sure to ask about the drop rating (for both the device and hard drive) for the tablets you are considering.

It's worth noting that the average annual total cost of ownership (TCO) of a ruggedized notebook is 40% lower than the average TCO of a non-rugged device, according to VDC Research. So purchasing a consumer-grade product and trying to make it work in a demanding enterprise environment is probably not the best solution.

Security

Security is crucial in a healthcare environment. Having options such as fingerprint scanners and smartcard readers, paired with bios-level security technology like Computrace, is critical. If mobile devices don't offer these options, you need to consider if they'll provide the appropriate level of HIPPA compliance.

Expertise

Since the announcement of the Recovery Act in February of 2009, we have seen a lot of interest in the healthcare market from technology companies. When considering a tablet, make sure you are working with a vendor that has substantial healthcare market experience. Lack of domain expertise can significantly complicate your launch efforts. You need a partner that can provide support from the evaluation process well into the deployment, not someone that will simply sell you a device.

Service & Support

Many new tablet products on the market are not replacements for current technology, rather an extra device for an IT department to manage. Multiple devices running different operating systems can complicate IT management issues. Also, since many new tablet devices will be widely available through consumer channels, it's likely physicians will purchase their own, bring them into the hospital and ask for IT support. We saw this very phenomenon in commercial markets with the iPhone. This forced IT departments to debate the pros and cons associated with having an "our technology only" rule versus a more open policy.

You should also consider the availability of software written for the device. In particular, how many full EMR applications are written for the platform?

Functionality

Although I stated earlier that there is no one-size-fits-all solution in the healthcare market, you definitely want to avoid devices that are one-dimensional. The ideal tablet (convertible or slate) allows clinicians to accomplish as much as possible with a single device. A well designed, lightweight convertible tablet can serve as both a physician's desktop computer and hand-held tablet for rounds and patient interactions. Mobile Clinical Assistants (MCAs) have integrated features such as barcode scanners, RFID readers and cameras to improve point-of-care productivity. Not all tablets can serve multiple roles or even allow for multi-tasking – something the demanding physicians we work with have come to expect as the price of entry. A well designed tablet will allow your staff to maximize productivity while limiting the number of devices your IT department needs to support.

Sanitization

Since hospital equipment must be frequently sanitized, choosing a tablet that can be repeatedly cleaned is another key factor to evaluate during the purchase process. If not properly designed, screen viewability could significantly degrade after repeated sanitization. It's good to ask what sort of testing has been done in this area, and if the device is IP (ingress protection) rated.

The move towards EMRs and the abundance of mobile computing solutions coming to market make it an exciting time to be in the healthcare IT business. Pure tablets like the MCA (including our Toughbook H1 Health), along with new generations of convertible tablets running Windows 7, are generating a lot of interest. Devices like the iPad will push the market forward and keep tablets at the forefront of the healthcare mobility discussion. But before you make a decision, step back and thoroughly evaluate your options. The wrong choice can have long-term ramifications for both the quality of patient care and bottom line performance.

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