



Discover ways clinicians are using touch computing to improve healthcare



Touch is becoming the “new normal” for how clinicians work and share information

Among physicians who use both EHRs and mobile devices (or tablets), the most common activities performed are sending/receiving email and accessing the EHR. In fact, according to a recent *Healthcare IT News* report entitled “Docs Prefer Tablets to Smart phones,” some 51 percent of physicians say they do so daily. Increasingly, doctors are using touch-enabled devices to communicate diagnostic results as well.

The rise of mobile health (mHealth) is enabling new efficiencies across the healthcare industry, as evolving devices and applications allow clinicians to do more with less.

The prevalence of touch devices ensures engagement among not only physicians and clinical staff, but patients as well.



Figure 1. Touch devices

Healthcare is learning the value of touch

As Intel's Worldwide Medical Director Mark Blatt, M.D. recently commented, *"Touch computing ties in directly with three key concepts surrounding the use of mobile in healthcare: use the right device for the right task, rearrange workflows to move toward collaboration, and think about the compute model in relation to what you're trying to accomplish."* For example, by using Snap mode in Windows* 8—and now, Windows 8.1—a physician has the ability to run two different applications on the screen at the same time.

So, a doctor could access a reference app, such as a neuroanatomy program that shows pictures of the brain and nervous system. At the same time, a DICOM viewer could show the patient's CAT scan on the other half of the screen, without the need to flip back and forth between images.



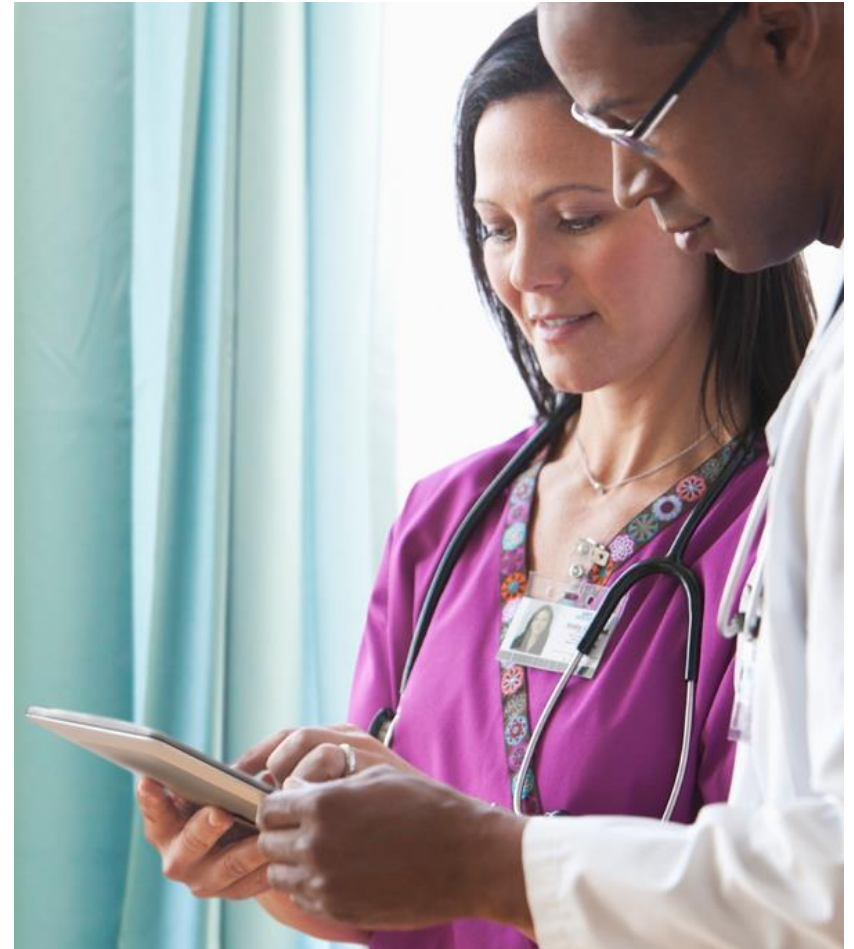
Touch will only become more prevalent going forward

Both clinicians and patients are geared toward using touch devices, often while in one another's presence.

Research firm Frost & Sullivan has listed mHealth among the top three topics in healthcare for 2013. In fact, 51 percent of respondents nominated mobility in healthcare as a top trend of the year.

This mHealth expansion is being attributed to the unprecedented spread of mobile technologies, as well as advancements in their application to address health priorities.

Healthcare needs to maximize productivity. User-accessible operating systems, such as iOS, Android, and Windows* 8/8.1, support touch computing. And the processing power required for touch is available in smaller, less expensive devices.



Good reasons for touch's popularity

Touch computing supports the natural human sequence: to look at an object, reach for it, and then touch it. Clinicians work on-the-fly. Being able to use small form factor devices with a touch interface has proven invaluable in healthcare settings.

Touch is intuitive. Unlike a computer keyboard and mouse, smart phones, tablets, and 2 in 1 devices don't require the development of motor skills.

Touch is a welcome addition to healthcare because it's one of a growing number of innovative modes—keyboard, mouse, and touch combined with gesture, voice, and machine vision—in which users interact with computing devices. Having this flexibility allows healthcare's mobile workforces to choose what works best in the moment.



“Clinicians are able to interact with a work device in the same, instinctive way they are accustomed to using a non-work device.”

Touch doesn't need to be the only game in town

The mouse didn't replace the keyboard, nor will touch devices completely displace the mouse or other input modes. Doctors, for example, will continue to choose the "right device" for the work at hand (charting, reading x-rays, communicating with colleagues, etc.).

Healthcare has embraced touch. However, as Linda Reed, RN, MBA, FCHIME, vice president and CIO, Atlantic Health System, said during a recent interview, "The industry is still determining the right mix of mobile devices for clinicians." As technologies evolve, so do solutions. Due to their flexibility, advanced functionality, security features, and projected cost savings, 2 in 1 devices and Windows* apps are emerging as the optimal hardware/software combination for health care settings.



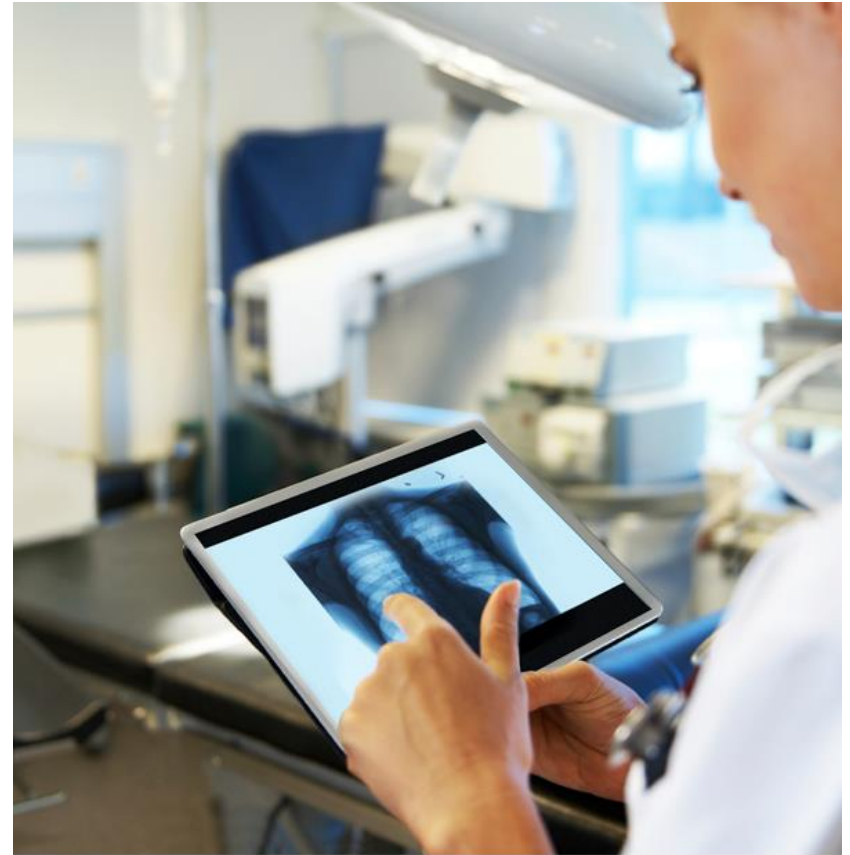
"The role of touch computing in healthcare will continue to reflect the needs and capabilities of a transforming industry."

Use touch where it makes sense

Physicians often prefer a touch device when making rounds because it provides ready access to patient chart and research information, offering a high level of functionality and security.

According to a recent special report sponsored by Voalté entitled, "Top 10 Clinical Communication Trends," 53 percent of staff nurses' shifts are devoted to tasks unrelated to patient care. Some healthcare systems are using touch devices to streamline communications with nursing staff. Doing so reduces miscommunication, allows nurses more time for patient care, and improves staff retention.

While mobile strengthens communications among physicians, enabling on-the-fly consults, touch enhances their ability to view and respond to diagnostic images. Touch devices also provide a convenient way to update patient notes.

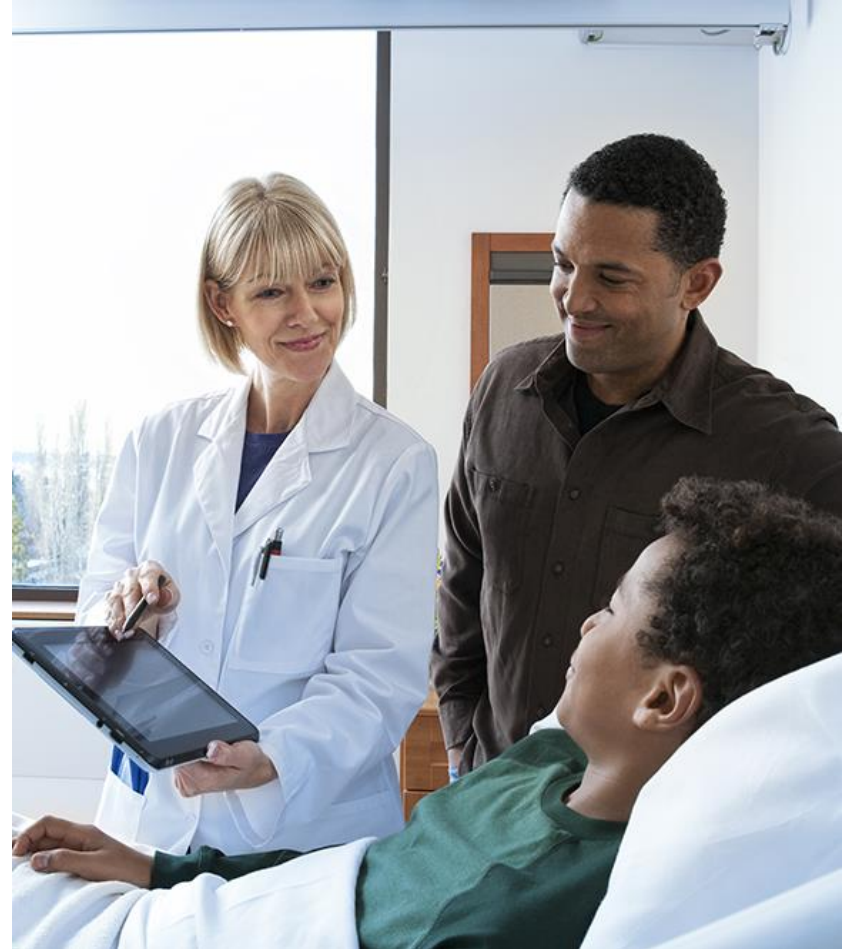


How smart phones, tablets, and 2 in 1s are making a difference in healthcare

Psychological nuances directly affect the ability of touch to increase organizational efficiencies in health care settings.

Physicians and patients, for instance, may prefer discussing health matters over a tablet or other touch device because it allows them to engage in shared content by unobtrusively touching images on a screen, rather than interrupting the process to use the mouse or enter keystrokes.

When doctors and patients discuss information over a touch device—with no physical barrier, such as a laptop screen, between them—both parties are more engaged in the moment. This enhanced engagement leads to more fruitful interactions between physician and patient.



Healthcare's mobile workforce is already "sold" on touch

Touch's role in healthcare settings stems from all the ways it makes the physician's job easier. In fact, usability testing conducted on Ultrabooks™ underscores the ease with which users are adapting to touch devices. So, don't be afraid to try a touch device now; they will only get better as physicians come to discover their full potential at the point of care.

According to a recent *Healthcare IT News* report entitled "Wireless health market poised for growth," the mobile devices and apps segment is also growing rapidly due to its wide applications and increased adoption by various healthcare professionals, pharmaceutical companies, and research laboratories. All this growth and expansion bodes well for touch.

Device Type	2012	2013	2014	2013-14 Change**
PC (Desk-Based and Notebook)	341,273	305,178	289,239	-5.2%
Ultramobile	9,787	20,301	39,824	96.2%
Tablet	120,203	201,825	276,178	36.8%
Mobile Phone	1,746,177	1,821,193	1,901,188	4.4%
Total	2,217,440	2,348,497	2,506,429	6.7%

**These percentages were calculated by Intel using the Gartner data.

Table 2. Worldwide Device Shipments by Segment (Thousands of Units)

Healthcare's mobile workforce is already "sold" on touch Continued...

A recent Gartner study, "Forecast: Devices by Operating System and User Type, Worldwide, 2010-2017, 3Q13 Update," reports that Ultrabook™ devices and other "ultramobiles" are rapidly gaining market share. Healthcare professionals add that Ultrabooks are increasingly prevalent in the clinical documentation/EMR arena. The selection of these types of devices is mostly driven by user preference, since many models offer both tablet and full keyboard functionality as needed.



Touch is where the spending is for hardware and software developers

Software development will continue to drive the adoption of touch in healthcare and other business settings.

Intel has created the [Intel® Developer Zone](#), which includes a section dedicated to developing applications that take advantage of touch and sensor hardware on the Ultrabook™ device.

Both Intel and Microsoft play significant roles in developing solutions for healthcare. With the release of Windows* 8/8.1, touch computing has jumped from the tablet to the PC. As healthcare integrates touch into PC environments, adoption will continue to rise.



“The Zone’s library of documents, code samples, demos, tools, and videos is helping developers write software optimized for touch, especially in apps for Windows* 8/8.1.”

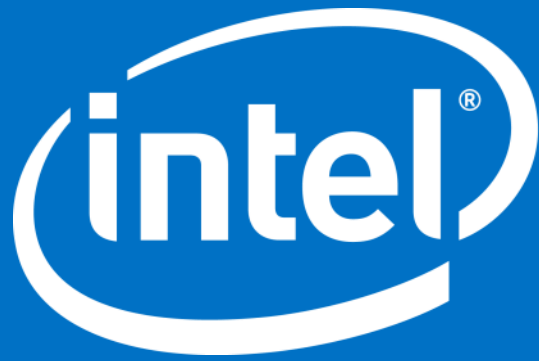
HIT is on board

As healthcare reform takes root in the U.S., hospitals and physicians will have no choice but to support mobile workforces. Projected cost savings, along with boosts to operational efficiencies and improvements to quality of care, make mobility—and, by extension, touch—an obvious tool of choice.

The emergence of IT solutions that are specific to the needs of mobile workforces is making it easier for health IT professionals to support devices in the field, where touch is playing an increasingly significant role.

Touch represents one of several important tools for improved workflow management.





© 2014 Intel Corporation. All rights reserved. Intel, the Intel logo, the Look Inside. logo, Look Inside., and Ultrabook are trademarks of Intel Corporation in the U.S. and/or other countries.

*Other names and brands may be claimed as the property of others.