WHITE PAPER

Workspace Transformation for Healthcare Providers

Enable caregivers to refocus on their patients while improving productivity and security with Intel® solutions and platform capabilities

In healthcare today, doctors and nurses are responsible for a growing number of tasks. In addition to interacting with patients, caregivers must record patient information into electronic medical record (EMR) systems, request information from other providers, perform clinical procedures, interpret results, share documents, initiate social services, and more (Figure 1). The fragmentation of these communication and collaboration tasks can present serious challenges to the delivery of high-quality care.

Figure 1. Doctors and nurses increasingly rely on technology across clinical workflows

Healthcare providers must address three common technology challenges to improve communication and collaboration among clinicians, allowing them to refocus on their patients. First, healthcare providers must address the insufficient integration among the various systems used by caregivers. Many healthcare environments employ multiple, disconnected technologies throughout common clinical workflows. For clinicians, remembering multiple passwords and transferring information among systems is inefficient and time-consuming.

Second, healthcare providers must find ways to refresh outdated technologies. Over the past several years, healthcare organizations have had large portions of their technology resources reserved for the transition to EMR systems. As a result, many caregivers are forced to use old computing and clinical devices that

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no longer fit their needs. Healthcare providers need to deploy a new generation of mobile devices that can provide clinicians with better technology experiences and facilitate more seamless transitions from one task to the next.

Finally, healthcare providers must find ways to enhance security while simplifying the use and management of security solutions. To protect information, healthcare providers often deploy multiple third-party software solutions. Unfortunately, the use of these solutions places additional burdens on clinicians, who must navigate disparate systems, and on IT administrators, who must manage those solutions.

Addressing caregiver workflow challenges by improving communication and collaboration must be a top priority. Inefficient technology implementations in healthcare cost hospitals an estimated USD 8.3 billion per year. This cost results primarily from inefficient communication and limited collaborative care coordination.[1] In many cases, caregivers are not reimbursed for the regular, timely care coordination functions that are critical for enhancing patient safety and improving outcomes. Financial losses will be compounded if providers are unable to deliver the high-quality care required to maximize reimbursement in a value-based marketplace.

Addressing the Needs of Multiple Stakeholders

As healthcare providers evaluate new technology solutions for addressing communication and collaboration challenges, they must select solutions that will meet the needs of multiple stakeholders across the organization:

- **CEOs** need mobile solutions that help keep caregivers productive and satisfied with their jobs. The right solutions can help the provider deliver greater value to patients, which can increase reimbursement, bolster patient loyalty, and attract new patients.
- **COOs** need ways to streamline clinical workflows and reduce operational waste. They want solutions that can make it easier for caregivers to collect information, access patient records, collaborate with other caregivers, and simplify administration.
- **CIOs** need to provide caregivers with efficient ways to work while also ensuring seamless integration and interoperability with legacy devices and systems. They also want to make sure new solutions provide the security required for rigorous healthcare regulations without adding significant complexity to IT administration.
- **CNOs** (chief nursing officers) want to reduce frustration among nurses and enable natural, easy interactions with multiple devices. Facilitating handoffs from one device to another and improving transitions of care from one provider to the next can help increase patient safety and improve patient outcomes.

Enabling More Efficient, Effective Communication and Collaboration

Intel® solutions and platform capabilities enable more efficient, effective communication and collaboration among caregivers while meeting the priorities of executives. Using technologies built on the latest generations of Intel® Core™ vPro™ and Core™ M vPro™ processors can help address integration issues, streamline workflows, and bolster security (Figure 2).

By using tablets, laptops, and 2 in 1 devices in conjunction with wireless docking stations, caregivers can simplify those connections, eliminating

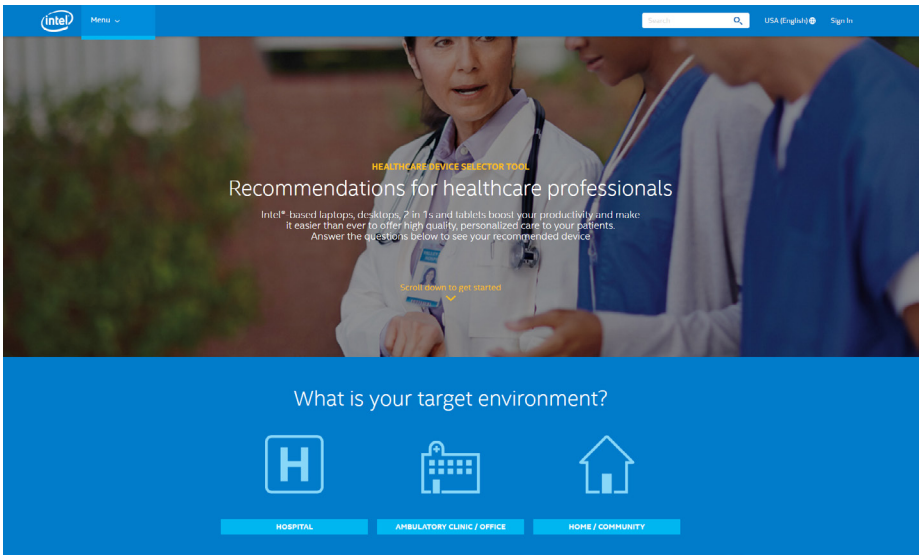


Figure 2. Healthcare professionals can use Intel's online device selector to find the right device to meet their mobility and collaboration needs

the need to search for the right cables and to physically connect devices. Clinicians can transition more seamlessly from the bedside to their offices or central stations. Devices equipped with the latest generation of Intel Core vPro and Core M vPro processors have WiGig technology built in, so healthcare providers can implement this wireless connectivity easily and cost-effectively. Integrated 128-bit encryption capabilities help ensure the data transmitted wirelessly stays secure and private. By making automatic connections among devices, WiGig lets caregivers simply drop, dock, and go.

Enable Real-Time and Secure Collaboration with Intel® Unite™

More and more, caregivers are called upon to collaborate as part of a multidisciplinary team in the delivery of care. Whether caregivers are consulting with offsite specialists, contacting social services personnel, managing clinical research with distant teams, offering telemedicine options for remote and homebound patients, or conducting review panels with geographically dispersed members, they need an easy, effective, and more secure way to communicate and collaborate in real time.

Intel® Unite™ facilitates real-time communication and collaboration by adding a simple and secure interface to traditional meeting applications. Intel Unite comprises software and an Intel Core processor–based mini-PC, which augments existing video conferencing and collaboration tools. Caregivers can use their preferred mobile devices and PCs to consult with remote users, quickly and more securely transfer files, simultaneously share and annotate content, and view multiple data sources, all in real time (Figure 3).

With an Intel Unite solution, providers gain multiple layers of security. The software requires PINs for attendees while the mini-PCs and mobile devices used by caregivers take advantage of the 128-bit encryption capabilities built into Intel® processors to help protect shared data. Because attendees log in through the enterprise network, providers also capitalize on existing network security policies and solutions. Patient information remains secure and providers maintain compliance.

Streamline Documentation with the Nuance PowerMic Mobile*

Intel mobile solutions can also help caregivers streamline workflows and overcome the challenges of navigating the use of numerous devices. For

Figure 3. Intel® Unite™ facilitates real-time communication and collaboration

example, using the Nuance PowerMic Mobile* dictation app with Nuance Dragon Medical 360* software on any Microsoft Windows*-based tablet, 2 in 1 device, or PC equipped with an Intel Core vPro or Intel Core M vPro processor enables caregivers to easily and accurately capture patient information and input data into an EMR system. Caregivers can eliminate the need for a single-purpose dictation device or a human scribe.

Eliminate Passwords with Intel® RealSense™

Intel is actively working with Microsoft and other partners to create solutions that use biometrics to streamline application access. The Intel® RealSense™ 3-D camera allows healthcare providers to capitalize on facial recognition to simplify the sign-on and sign-off processes. RealSense integration with the Microsoft Windows 10* operating system lets caregivers log in to multiple applications rapidly without having to enter several passwords by hand. Automatic sign-out capabilities help secure data, comply with regulations, and avoid slowing down the next user on a shared system.

Safeguard Data and Maintain Compliance with Hardware-Assisted Security

Intel mobile solutions incorporate hardware-assisted security technologies that can help healthcare providers implement a multifaceted approach to security while improving usability and minimizing administrative complexity. For example, healthcare providers can choose the self-encrypting models of Intel® Solid-State Drives (Intel® SSDs), which use hardware-based 256-bit encryption to protect data. Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) technology built into Intel Core vPro and Core M vPro processors enables encryption to run in the background while minimizing performance effects for the user. Intel® Identity Protection Technology (Intel® IPT), which is built into the Intel Core vPro processor architecture, provides role-based security that prevents unauthorized users from accessing healthcare systems, even if they have a stolen username and passcode.

Intel® technologies also help improve the experience for IT administrators by providing more seamless security across a platform of devices. For example, Intel® Active Management Technology (Intel® AMT) facilitates remote management so IT administrators can quickly deploy security patches and remediate problems regardless of the operating system and power state of the device.

Improving the Quality of Care

Healthcare providers need ways to address fragmented communication and collaboration workflows so they can improve outcomes, minimize errors,

enhance efficiency, and reduce costs. The technology solutions they select should address common integration, security, and compliance concerns while also fitting within healthcare technology budgets. Intel solutions and platform capabilities can simplify a wide range of communication and collaboration tasks while bolstering security and reducing IT complexity. With Intel mobile solutions, healthcare providers can improve communication, increase collaboration, and refocus their time and resources on patients.

Learn More

Intel Mobile Healthcare:

www.intel.com/content/www/us/en/healthcare-it/mhealth-powering-the-health-workforce.html

6th Generation Intel Core vPro Processors:

www.intel.com/content/www/us/en/processors/vpro/core-processors-with-vpro-technology.html

Intel Online Healthcare Device Selector:

https://syndicatedtools.intel.com/healthcare-device-selector-tool/en-us

WiGig Technology:

www.intel.com/content/www/us/en/wireless-network/wireless-products.html

Intel Unite:

www.intel.com/content/www/us/en/architecture-and-technology/unite/intel-unite-overview.html

Intel SSDs:

www.intel.com/content/www/us/en/solid-state-drives/solid-state-drives-ssd.html

Intel AES-NI:

www.intel.com/content/www/us/en/architecture-and-technology/advanced-encryption-standard--aes-/data-protection-aes-general-technology.html

Intel IPT:

www.intel.com/content/www/us/en/architecture-and-technology/identity-protection/identity-protection-technology-general.html

Nuance PowerMic Mobile App:

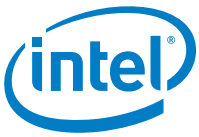
www.nuance.com/for-healthcare/capture-anywhere/360-mobile-solutions/powermicmobile/index.htm

Intel RealSense Technology:

www.intel.com/content/www/us/en/architecture-and-technology/realsense-overview.html

Intel vPro Technology:

www.intel.com/content/www/us/en/architecture-and-technology/vpro/vpro-technology-general.html



[1]Ponemon Institute, "The Economic & Productivity Impact of IT Security on Healthcare," May 2013, www.ponemon.org/blog/the-economic-productivity-impact-of-it-security-on-healthcare

Intel® AES-NI requires a computer system with an AES-NI-enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on Intel® processors. For availability, consult your reseller or system manufacturer. For more information, see http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni/

Intel® AMT requires activation and a system with a corporate network connection, an Intel® AMT-enabled chipset, and network hardware and software. For notebooks, Intel AMT may be unavailable or limited over a host OS-based VPN, when connecting wirelessly, on battery power, sleeping, hibernating, or powered off. Results dependent upon hardware, setup, and configuration. For more information, visit http://www.intel.com/content/www/us/en/architecture-and-technology/intel-active-managementtechnology.html

No computer system can provide absolute security under all conditions. Built-in security features available on select Intel® Core™ processors may require additional software, hardware, services, and/or an Internet connection. Results may vary depending upon configuration. Consult your system manufacturer for more details. For more information visit www.intel.com/technology/security

No system can provide absolute security under all conditions. Requires an Intel® Identity Protection Technology-enabled system, including a 2nd gen or higher Intel® Core™ processor-enabled chipset, firmware and software, and participating website. Consult your system manufacturer. Intel assumes no liability for lost or stolen data and/or systems, or any resulting damages. For more information, visit http://ipt.intel.com.

Intel® vPro™ Technology is sophisticated and requires setup and activation. Availability of features and results will depend upon the setup and configuration of your hardware, software, and IT environment. To learn more, visit http://www.intel.com/technology/vpro

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