

# Medical IT Solutions:

## Products and Applications to Improve Healthcare



Healthcare IT field is expecting to hit \$31.3 Billion in total revenue this year, up from \$21 Billion just 5 years ago; an astounding level of growth that shows no signs of slowing. The primary factors have been the demand for Clinical Information Technology, and Administration Technology – combining Electronic Health Records with Patient Billing and Insurance Information, and Hospital Operations Big Data to create a more efficient, profitable, and effective healthcare organization. The end goal of the growing Healthcare IT system is to convert all paper-based operations to digital, which are more reliable, affordable, and more easily accessed.

However, the need to integrate all EHR data with administration operations has prompted the growth of Healthcare IT beyond the accounting department and the records room. Today's Healthcare IT products can be found in waiting rooms, treatment rooms, surgical theaters and emergency rooms. They're involved in every aspect of patient care, from the ambulance ride right through the recovery room.

In this month's whitepaper, we evaluate three areas where Medical IT solutions are being used to benefit patients and healthcare providers, and discuss Estone Tech products that provide solutions for these areas.

### **Reducing Costs: Making Healthcare Affordable and Profitable**

One of the biggest, most frequently revisited issues in healthcare is affordability. As individuals grapple with the cost of insurance, and insurance companies haggle with hospitals for ever lower rates, and providers seek to cover the costs of their supplies, employees, and required insurance, someone always seems to end up holding the short end of the stick. Reducing costs in care and care management is a simple way to reduce the burden for all parties. According to a 2016 study by Compass Healthcare Solutions, compensation for non-medical healthcare professionals increased 69.9% between 1997 and 2012, and nurse/physician compensation costs increased more than 80% over that period.<sup>1</sup> While healthcare employees are necessary, healthcare providers may be able to reduce costs for patients and improve profit margins through technology. The MIT Technology Review identifies a number of ways in which Medical IT can reduce healthcare costs.<sup>2</sup>

Some of the solutions are fairly straightforward; eliminating paperwork, reducing errors, and making tools and equipment portable so that one set can be used for many patients and treatment rooms. One of the most popular healthcare IT tools for that is the mobile Medical Computer Cart – a self-contained cart



<sup>1</sup> <https://www.compassphs.com/blog/healthcare-costs-are-rising-but-where-is-the-money-going/>

<sup>2</sup> <https://www.technologyreview.com/s/518946/technology-the-cure-for-rising-healthcare-costs/>

stocked with a powerful computer, power supply, and storage for frequently needed tools and equipment.

With a medical computer cart, a single healthcare professional can easily record information from many patients in an office setting, or take vitals and administer medications safely to an entire inpatient ward. This allows a reduction in manpower and equipment costs, and significantly reduces opportunities for error that can be even more costly.

### **Improving Care: Technology to Bring Patients the Best Outcomes**

Improving patient outcomes is something that everyone involved in healthcare can get behind. Hospital administrators desire improved patient outcomes as a way to raise the hospital profile, attract better doctors, and earn a reputation among patients and insurers. Toward that end, hospitals have begun to pursue things like ‘Magnet’ credentialing for nurses<sup>3</sup>, which has been shown to improve patient outcomes. Additionally, each year, anywhere from 15,000 to 19,000 malpractice cases are brought in the US – costly errors that result from poor patient outcomes due to bad practices.<sup>4</sup>

One of the best ways to improve patient care is via easily accessible Electronic Health Records. 75% of all respondents to a US Government survey indicated that EHR’s allowed them to provide better patient care and improved patient outcomes.<sup>5</sup> Though EHR’s can be collected, maintained, and accessed, in several ways, one of the top choices today is with a medical tablet computer. A medically certified tablet is an increasingly common piece of technology that can be carried by doctors, nurses, emergency medical personnel, dentists, and anyone else who may have reason to access or modify your electronic health records.



Such tablets allow individuals to view and update information, scan in forms, medications, and test sample receptacles, view and demonstrate x-rays, radiography scans, and other test data, and even obtain electronic patient signatures and confirmation. Emergency responders can use medical tablets to send or receive patient care information while enroute to the hospital, aiding in triage and reducing lost time.

Estone Tech offers medically certified tablets in a variety of styles and sizes. Equipped with tools like integrated barcode scanners, quality cameras, stylus pens, and a variety of connectivity options, such tablets make it easy to improve the quality of care, anywhere.

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<sup>3</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4462174/>

<sup>4</sup> <http://www.ohiotiger.com/common-causes-medical-malpractice-claims/>

<sup>5</sup> <https://www.healthit.gov/providers-professionals/improved-diagnostics-patient-outcomes>

## Increasing Accessibility: Giving Patients More Control

Whether in the hospital, or recovering at home, individuals receiving medical treatment are often limited in how much they can engage with their treatment, and the rest of the world. Weakness, Temporary or Permanent Paralysis, Mental or Physical Incapacities, and Bedriddenness may all prevent an individual from connecting or fully engaging with the outside world.

Fortunately, Infotainment and Accessibility tablet and panel PC solutions from Estone Tech offer opportunities to reclaim this access. When in the hospital, Infotainment panel PCs provide exceptional communications and control capacity for patients and their caregivers, allowing them to review paperwork, medical orders, test results, and bills, request treatment and service, and select from a variety of communications and entertainment options, all from one device.

At home, patients may find benefit in tablet and panel PCs designed to assist them with accessibility. Estone Tech manufactures tablets that mount to wheelchairs and other medical devices, and can be controlled by hand, or accessible control schemes like Gaze Interaction. These devices allow individuals to communicate with others and control or access much of their surroundings.



## Conclusion

Taken together, these and other types of Medical IT technology can greatly improve the future of healthcare, while improving the business outlook for providers. Estone Tech is an electronics OEM with extensive experience with medical electronics. Contact us for assistance with your next project.