



## Healthcare Technology Insights White Paper

### Introduction

December 31 is a time for reflection on a year gone by and a look to the new year with the promises it holds. The year 2020 was especially promising, not just because of the symmetrical sound of “2020” or that it was a leap year, but that it was the start of a new decade. The first few months of 2020, however, brought a virus that not only took over headlines, but took over the world. The COVID-19 pandemic has affected millions of people around the globe, bucking social norms, workplace rules, and basic everyday life. Healthcare workers have found themselves at risk, working round-the-clock to find a cure, comfort those afflicted, and protect the public from an invisible foe. The pandemic brought unprecedented challenges and decisions that have required nimble and unique solutions.

ScanSource, Inc., a leading global provider of technology products and solutions, focusing on markets such as barcode, point-of-sale, payments, unified communications and collaboration, physical security and networking, and cloud services, is committed to helping its customers choose, configure, and deliver the industry’s best solutions to combat COVID-19. ScanSource recognizes that COVID-19 is having an indelible impact on businesses across the globe. ScanSource is a trusted partner as your customers experience challenges in maintaining not only the day-to-day operation but also the general morale of their work forces. Our goal is to provide as much sales and technical support as we can, while delivering valuable information that may impact our customers’ businesses.

## Healthcare Technology Experts

From patient safety, telemedicine, secure-network connectivity, and managed services to physical security, redundant critical power, and more—ScanSource delivers complete healthcare solutions that enable patient care and protect healthcare providers with speed and efficiency. Healthcare is an especially challenging market, requiring stringent certifications and high standards for almost every piece of equipment that enters the facility. Add challenging conditions to the equation and satisfying those requirements borders on the impossible. ScanSource is a willing partner as you enter the healthcare market, positioned to tackle its unique needs in these unprecedented times by offering:

- Dedicated, experienced sales representatives
- Nimble and agile customer service that can handle any request
- Knowledgeable technical support
- Skilled professional services via ScanSource Services

ScanSource knows a thing or two about solving problems. From design, to proposal, to delivery, our focused experts help you at every step of the way to implement a complete solution. They know your technologies inside and out, from unified communications and collaboration, to mobility and data capture, to video surveillance. And no matter what kind of support you need for your business, you can always rely on ScanSource to provide it.



## ScanSource Delivers Solutions

While ScanSource has never endured a global pandemic, our industry has withstood many challenging and volatile situations, including recessions, market instability, and other healthcare crises. Certainly, when the health and safety of humans is impacted, it brings a new level of concern.

ScanSource has identified the following areas of importance to the medical and healthcare industries and the components that comprise each solution.

Medical Area of Use	Solution Components
Patient Identification/Intake	antimicrobial keyboards, barcode printers, wristband printers, health-grade monitors, payment terminals
Mobile	mobile handheld computers, mobile printers, touchscreens/health-grade monitors, mobile carts, tablets, barcode scanners, wristband printers, wireless networking, routers/switches
Telemedicine	health-grade monitors, communication systems, portable speaker phones, business-grade headsets, routers/switches

Specimen Collection	barcode printers, barcode scanners, mobile handheld computers, mobile carts
Medicine Administration	barcode scanners, barcode printers, mobile handheld computers
Lab Management	barcode scanners, barcode printers, health-grade monitors
Pharmacy Management	health-grade monitors, barcode scanners, point-of-sale systems, payment terminals, barcode printers
Data Capture Management	barcode scanners, mobile handheld computers
Healthcare Communication	mobile computers, communication systems, portable speaker phones, business-grade headsets, video conferencing
Nursing Station	health-grade monitors, antimicrobial keyboards, mobile handheld computers, communication systems, business-grade headsets
Self-service Kiosk	health-grade monitors, antimicrobial keyboards, mobile printers, payment terminals
Wayfinding	digital displays/touchscreen monitors, printers
Security and Surveillance	video surveillance, security cameras, wireless networking, wireless routers, mobile handheld computers
Access Control	physical access control systems, wireless networking, wireless routers, RFID tags, mobile handheld computers
Asset Tracking	wireless networking, wireless routers, RFID tags, labels, mobile handheld computers

The challenges we are facing due to the COVID-19 virus are wide-reaching and affect every aspect of our current healthcare system. Beyond the threat to human life, which is the main concern of all healthcare professionals, this virus has laid bare the lack of preparedness and low resources and supplies of the current healthcare model in the United States. Disease profoundly impacts a community by upending routines and rattling nerves. The effects of a pandemic, however, extend beyond the present moment of its existence. A crisis like this permanently alters the people who treat and the facilities in which they work. Crisis demands action and response. Many of the infrastructure improvements and healthy behaviors we consider normal today are the result of past health campaigns that responded to a crisis. Unfortunately, it is human nature that requires unprecedented challenges to force fundamental changes to the status quo by updating tired procedures, revitalizing staff, and embracing new technology.

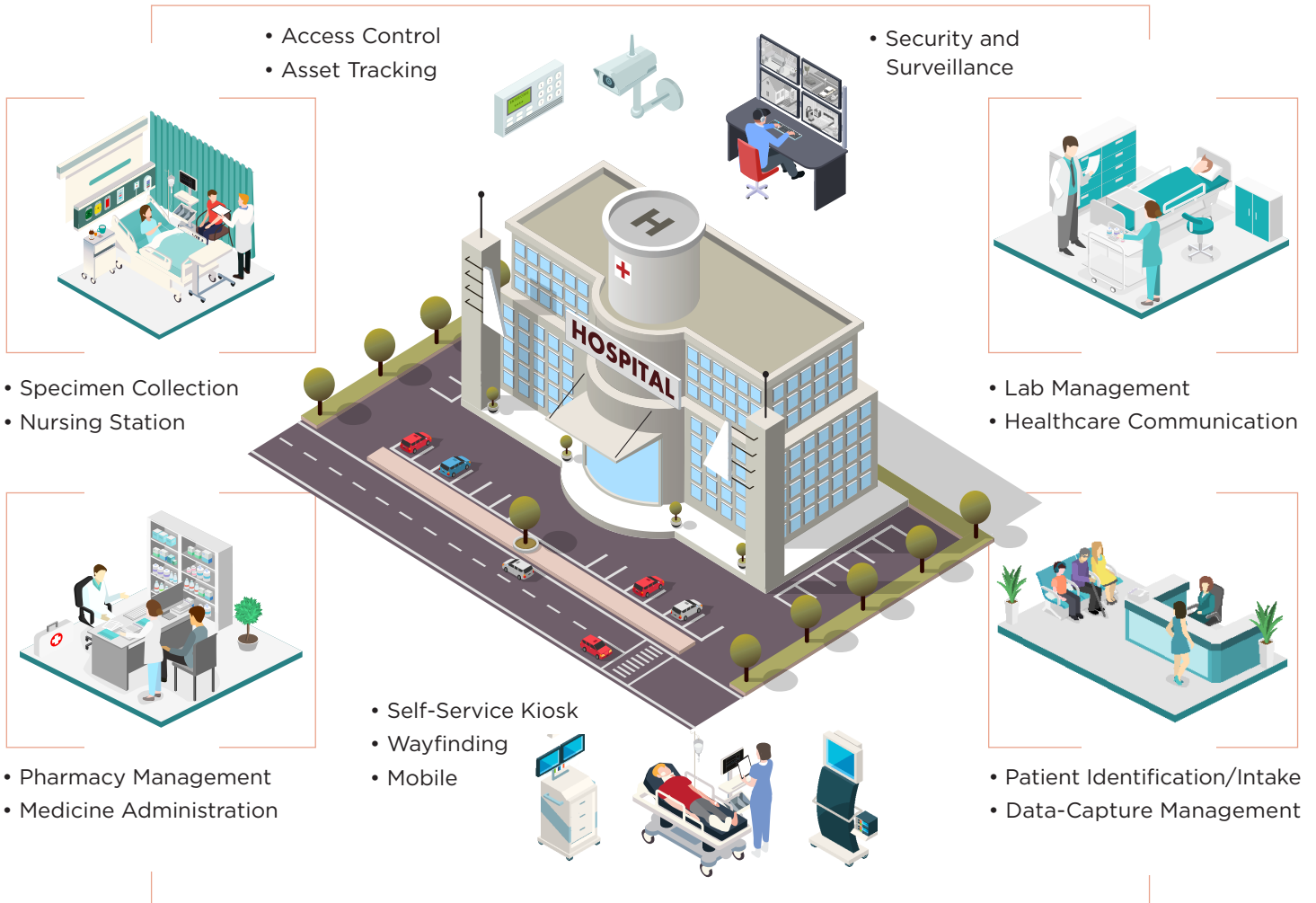
## Patient Experience

Patients are paying more out of their own pocket for their medical care since the medical insurance landscape has experienced some significant changes in recent years. As more patients are responsible for a larger portion of their healthcare bill, they naturally demand better services from their providers. A trend that has cut across many industries is the shift towards “on-demand” services, like car services and food delivery. Patients—or healthcare consumers—are looking to easily order services when they want, where they want, and have the request delivered promptly. They also want to be able to order those services from their phones.

By 2025 it is estimated that there will be 5.9 billion unique mobile phone subscribers—approximately 71% of the world’s population. The healthcare industry, from conglomerates to private practices, will have to provide “on-demand” health care. Healthcare locations that make it easier to schedule appointments, contact healthcare providers, and review options online will almost certainly attract more affluent and technologically sophisticated consumers. Customers have become accustomed to

being able to order almost any service “on-demand” and will almost certainly expect to be able to book an after-hours doctor in very much the same way.

Creating an outstanding and streamlined user experience is paramount. A patient portal keeps all patient interactions in one place, enabling access to patient’s history—which is updated in real time—from one centralized record to avoid costly mistakes.



### Rising Healthcare Costs

Hospitals are now run like small- or medium-sized businesses and involve all conventional business operations, practices, and procedures. A hospital administrator has to manage the business side to ensure smooth running of their facility on all fronts. The business aspects encompass management of human resources and personnel, establishing policies and procedures, maintenance of computer systems and databases, allocation of budgets, keeping track of accounts and finance, and other organizational systems. He or she coordinates with professionals, staff members, and other employees and assigns their duties and tasks.

The rise of corporate medicine, where profits are as important as care, coupled with the savvy medical consumers will inevitably lead to higher healthcare costs. These higher costs are a result of more people striving to live longer and healthier lifestyles. Research reveals healthcare costs and

spending often rise at rates exceeding inflation, and we should expect them to increase in the future. The Office of the Actuary at the Centers for Medicare and Medicaid Services estimates that aggregate health care spending in the United States “will grow at an average annual rate of 5.8 percent from 2015 through 2025, or 1.3 percentage points higher than the expected annual increase in the gross domestic product.” This causes a huge concern for businesses as they seek to provide affordable coverage for their employees.

## Cybersecurity

Information is power, and most of us willingly sacrifice our private information for convenience. Corporate medicine wants as much data about their customers as any other business that sells traditional consumables. Corporate medicine’s need for sensitive personal data is in the patient’s best interest, doctors have access to health records at their fingertips that may assist in a more accurate diagnosis or treatment option. On the other hand, corporate medicine can use this data to market directly to a patient, just as an automobile company pushes a targeted ad. The arguments for or against the collection and use of personal medical data will continue for years to come, the reality is that medical corporations have this data. Due to the highly sensitive patient information collected by healthcare organizations, the industry has become a prime target for cyber criminals. In 2017, the US medical and healthcare sector experienced over 350 data breaches, exposing 4.93 million patient records. Unfortunately, this trend shows no signs of slowing down, with more than 32 million patient record breaches in the first half of 2019.

This trend will continue, as many healthcare providers are still slow in responding to threats while the decentralized systems make them more vulnerable to attacks.

## Healthcare Needs

The safety and security for staff, patients, and visitors is top priority for healthcare facilities. But these facilities are under constant pressure to also balance patient safety with managing costs and constant visitor traffic, open access in multiple buildings, hectic emergency departments, confidentiality requirements, governmental and accreditation standards and patient satisfaction scores.

The inability to successfully handle these responsibilities can earn a healthcare facility an unsafe reputation. When creating a solutions-driven and evidence-based safety and security program, you need a security services partner who is responsive with the expertise needed for the unique security challenges within healthcare.

## Facilities

Security, safety, and health are crucial to providing optimum patient care at healthcare facilities, from the local doctor’s office to expansive healthcare campuses that include hospitals, clinics, and critical care facilities. Healthcare facilities have unique security and surveillance needs, ensuring the safety of staff, patients, and visitors while maintaining the highest level of privacy protection.

All healthcare facilities face similar challenges: knowing who is inside their facility, monitoring access points, and tracking sensitive material including drug containers, toxic material, and critical samples for testing. Effective and high-quality solutions that improve the safety and security of any healthcare facility, include:

- Surgical centers, emergency rooms, and exam rooms
- Internal spaces such as storage locations of sensitive or dangerous substances
- Entrances and exits, including employee entrances, public gates, parking areas, and limited-access spaces
- Storage areas for drugs or toxic material; plus tracking functions to ensure proper handling and delivery

Today's surveillance solutions can provide a wide range of services beyond simply recording movement, such as:

- Heat mapping can track the flow of traffic and optimize which gates are open at which times
- Foot traffic tracking for various entrances
- Searching recorded footage for people fitting a certain description

**Medical area of use:** mobile, security and surveillance, access control, and asset tracking

## Staff

Effective facility security starts with creating layers of protection. In healthcare, the first layer is an engaged employee population. A staff that understands their environment and the need for security measures can assist the public to safely navigate a large medical campus or a local doctor's office in a manner that engages the patient or visitor, making them feel included rather than shut out.

## Clinical

The clinical staff is the lifeblood of any healthcare facility. While receptionists and back-office staff are key members of any team, healthcare consumers are primarily interested in medical professionals, doctors, nurses, pharmacists, and other medical roles.

Clinical staff are becoming more connected to their colleagues and patients due to the rapid rise of technology. One key area of technology, Internet of Things (aka IoT) refers to a network comprised of physical objects capable of gathering and sharing electronic information. The IoT includes a wide variety of "smart" devices, from industrial machines that transmit data about the production process to sensors that record information about the human body, monitor air quality, and track toxic substances.

Wearable devices such as smart watches and health bands are already becoming commonplace. These connected devices can transfer data over a network without requiring any human input and remotely monitor patient health. They also empower the patient to better monitor their own conditions.

As connected medical devices proliferate, medical professionals will have access to better quality data. Connected devices also deliver alerts to hospitals if the patient requires emergency assistance. All of the data that is produced from these connected devices can be stored in the cloud where it can be analyzed via machine learning. This can improve the ability to deliver accurate and efficient patient diagnosis.

**Medical area of use:** mobile telemedicine, nursing stations, and specimen collection

## Administration

Healthcare administration is a broad topic, encompassing CEOs of healthcare conglomerates, hospital laboratory managers, and the in-take staff at a doctor's office. A large part of the administrator's job concerns managing patient records. The administrator must make sure that medical histories, current health information, billing, insurance, and legal documents are all being handled appropriately. Keeping all of this information organized and up to date is an essential role that a hospital administrator must fulfill.

Visitor management software can tackle many tricky security tasks. Visitor check-in kiosks can query the patient management system to see if a patient has been discharged yet. If not, it can print out a sticker admitting the visitor only to the floor the patient is on. It can also tie visitors to watch lists and set up silent alerts to keep patients out of danger.

**Medical area of use:** medicine administration, lab management, pharmacy management, data-capture management, and healthcare communication

## Location

Where we receive our healthcare has changed over the past decade. The local family doctor is being replaced by the proliferation of corporate medical locations and by technology. Healthcare organizations will face tougher competition in attracting and retaining patients who demand an experience that matches the level of customer service they expect from other corporate brands. The proliferation of mobile technology fostered the consumer attitude of purchasing, scheduling, or paying for anything at anytime from anywhere. Medical consumers—or patients—will demand a more streamlined healthcare experience so they can resolve most questions, issues, or concerns (for example, downloading an immunization record, booking an appointment, paying their bills, or checking their account/insurance status) whenever, wherever, and however is most convenient for them.

Just as important as one-on-one communication, mass communication inside most healthcare organizations is just as important. A smaller clinic can limit their notification system to simple local announcement, whereas a hospital might need multiple mass notification channels. Some fire detection and alarm systems offer non-fire-related mass notification capabilities that you can program with custom alerts, but it's especially critical in large facilities where people receive information in varied ways.

For healthcare organizations offering a variety of services in different locations, it's also important for every employee to have access to the most up-to-date patient information from one centralized location. Not only will it deliver a better patient experience (who wants to tell their story from the beginning every single time?) but also help avoid fatal mishaps such as drug interactions.

**Medical area of use:** telemedicine, patient identification/intake, nursing station, self-service kiosk, wayfinding

At ScanSource, our goal is to provide as much support to our partners as possible, enabling them to meet the rising needs in healthcare. For more information, contact your ScanSource representative at 800-944-2432.

i. <https://www.gsma.com/mobileeconomy/wp-content/uploads/2018/02/The-Mobile-Economy-Global-2018.pdf>

ii. Information was provided by the Society for Human Resource Management "Managing Health Care Costs Jan 11, 2017" article. Retrieved from The Office of the Actuary at the Centers for Medicare and Medicaid Services estimates that aggregate health care spending in the US

iii. (<https://medium.com/@MailMyStatement/5-major-challenges-facing-the-healthcare-industry-in-2019-60218336385f>)