



## Elevating Patient Care with Accurate Staff Locationing

Helps Optimize Workflows, Accelerate Response Times and Improve Safety

According to the World Health Organization (WHO), the shortage of global healthcare workers is projected to rise to over 14 million in 2030.<sup>1</sup> An overall shortage of doctors, clinicians and nurses means that clinicians will face ever-increasing workloads, particularly as the world's population ages and chronic health conditions increase, that could negatively impact patient care.

Already, clinicians are overtasked. Nursing units receive an average of 7,000 patient-initiated calls per month.<sup>2</sup> Shifts are filled with clinicians checking patients' vital signs, administering medications, checking diagnostic results, collaborating with physicians, responding to emergencies and more. At the same time, patient acuity changes rapidly, requiring adjustments to staffing levels.

White boards highlighting staff assignments are stagnant in nature. Clinicians don't have visibility into real-time staff location and must frequently leave a patient's bedside to search for colleagues or specialists to assist them in delivering care.

Hospital-acquired infections are also rampant. Approximately one in 25 patients acquires a healthcare-associated infection during their hospital stay.<sup>3</sup> The CDC recommends that clinicians wash their hands as many as 100 times in a 12-hour shift to combat the spread of infection.<sup>4</sup> Ensuring compliance with hand hygiene protocols, however, is difficult.

The good news is that cutting-edge hospitals are investing in location technologies to eliminate workflow bottlenecks, streamline alarms, reduce non-value activities and ensure compliance with regulations and protocols.

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**83%** of hospitals anticipate expanding usage of location technology by 2022 to improve staff operational efficiency.<sup>5</sup>

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<sup>1</sup>World Health Organization; <sup>2</sup>University of Utah; <sup>3</sup>The Centers for Disease Control and Prevention; <sup>4</sup>The Centers for Disease Control and Prevention; <sup>5</sup>The Future of Healthcare 2022 Hospital Vision Study

## Tracking Staff Movements Provides Key to Better Patient Care

Hospitals are finding new ways to increase efficiency and deliver better care despite ongoing labor shortages. That's why many are turning to location technology to improve efficiencies, accelerate rapid response, control the spread of infection and reduce costs.



### Boosting Workflow Efficiency

Hospitals are plagued by inefficient processes that reduce staff effectiveness and decrease patient satisfaction. With staff locating technology and mobile computers, hospitals can identify and streamline inefficient processes and eliminate bottlenecks. They can effectively track alarms, response times and the precise length of time a clinician spends in a patient's room. If specific patient care parameters aren't met, like a bedside check every 30 minutes, clinicians can be alerted.



### Accelerating Emergency Response

Real-Time Locating Systems (RTLS) technology is proving extraordinarily effective in identifying and mobilizing the nearest specialized staff to respond in health emergencies, such as heart failure or stroke, or security situations where clinician safety is at risk. Clinicians and safety officers equipped with mobile computers can visualize every member of their team on a map and quickly mobilize resources to respond to swiftly changing conditions.



### Adjusting Staff Levels Appropriately

Due to the unpredictable variability in patient acuity, estimating staffing requirements can be challenging. Many organizations are turning to RTLS, Radio Frequency Identification (RFID) and mobile computing technology to dynamically balance patient care based on area-specific acuity and workload and automatically assigning clinicians to patients based on their proximity. By analyzing historical data, administrators can more accurately predict future requirements and adjust staffing levels to better meet patient needs.



### Controlling the Spread of Infection

Proper hand hygiene is one of the most important tools in battling the spread of infections. Unfortunately, a recent study revealed a compliance rating of only 23% of healthcare workers.<sup>6</sup> Hospitals are addressing this problem by employing RFID to track and record healthcare workers' compliance with hand hygiene protocols before entering and after leaving a patient's room. Hospitals can also identify clinicians who have come in contact with a contagious patient and quickly take appropriate measures to reduce further spread of illness.



### Calculating the True Cost of Care

With RTLS, RFID and mobile computers, hospitals can more accurately calculate the amount of time invested in each patient by breaking information down by staff member, treatments and tests delivered and medical equipment employed. This data gives hospitals unprecedented visibility into the true cost of patient care.

<sup>6</sup>Becker's Hospital Review

## Zebra Has Your Staff Tracking Solution

Knowing where your staff is at any given moment has never been more critical. Zebra's staff tracking solutions give healthcare organizations the level of visibility required to optimize workflows, accelerate response times, improve safety and patient care. No matter the size of your healthcare organization, Zebra can customize the right technology solution for you.

### The Foundations of Staff Tracking



#### Employee Identification Card Printers

Where there is attention and high financial value, there's also a high risk for fraud. Zebra's ZXP Series printers are specifically engineered for high-security employee card applications.

- Outstanding print quality
- Flexible, hassle-free operation
- Exceptional cost savings
- Lightning-fast speed
- Remote printer monitoring
- Security features



#### Ultra Wide Band (UWB) Real-Time Locating System

UWB is a world-class platform that enables real time, precise visibility into staff location. The system, which includes UWB Hub, Sensors, Tags, Vision Reader and a Wand, uses patented techniques to provide unique RTLS benefits.

- Exceptional performance in multi-path environments
- Fast, intuitive setup
- Excellent real-time location accuracy



#### RFID Tags, Fixed Readers and Antennas

Zebra's RFID readers, tags and antennas enable hospitals to quickly and accurately identify the location of critical staff. Location solution products and RTLS software work together to provide unmatched visibility into staff operations.

##### RFID Readers

- No hard-wired connections required
- Easy to deploy
- Simple to manage

##### RFID Antennas

- Maximize the performance of RFID readers
- Deliver high throughput, high-capacity communication
- Form factors range from picture-frame discrete aesthetics to rugged designs



#### Handheld Mobile Computers

Zebra's mobile computers empower the healthcare workforce with real-time staff location information. Zebra mobile devices have all the benefits of an intuitive user-interface design, found in traditional consumer products, along with rugged reliability required for the healthcare environment.

- Durable with the highest drop rating
- Removable batteries built to last a full shift
- Easy-to-clean, disinfectant-ready plastic
- Enterprise-grade accessories such as attachable RFID sleds

## Software and Support

### Link-OS: Zebra's Intelligent Printer Operating System

Link-OS is Zebra's one-of-a-kind enterprise printer operating system. Enabling advanced connectivity capabilities, extensive device management and advanced privacy controls, no other printer OS delivers this level of intelligence and innovation.



### OneCare Visibility Services

OneCare support services ensure that Zebra devices achieve maximum uptime and peak performance. Multiple service levels are available to meet each hospital's unique requirements and protect operational investments.



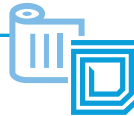
### Savanna

Savanna is an integrated software package that provides staff location reports, maps, alerts and dashboards to hospitals. Using proven algorithms and rules engines, the middleware derives actionable information and context from the location data and provides a common set of outputs to share with healthcare applications.



### Certified Supplies

Zebra's Certified Supplies help improve efficiency and productivity with the highest quality, RFID labels and tags. Supplies are pre-tested to ensure their ability to withstand the rigors of the healthcare environment and remain readable.



### Independent Software Vendors (ISVs)

Zebra's global network of ISVs offer innovative applications developed to work specifically with Zebra devices and systems. ISVs can help healthcare organizations identify the best applications to meet individual needs or provide customized solution development to address unique requirements.



## Purpose-Built Features

### Android Operating System

Zebra has the largest range of enterprise optimized Android devices in the industry, purpose built to improve productivity and mobility in your business.

### Mobility Extensions

Exclusive to Zebra, Mx Technology is built into every device which means Android security is uniquely hardened for use in even the most demanding enterprise environments.

### Productivity Applications

Help hospitals eliminate waste and inefficiencies.

### Mobility DNA

A suite of secure, easy-to-use apps developed by Zebra to support healthcare environments.

To learn more about Zebra's staff tracking solutions, visit [www.zebra.com/healthcare](http://www.zebra.com/healthcare)



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