



Are You Moving Patients Around Your Healthcare Facility Efficiently?

Discover how real-time location services-enabled patient wristbands can improve patient flow

Nobody likes lingering in a healthcare facility. “None of us go to the emergency room wanting to spend a lot of time there,” said Mark Robinton, Vice President of Internet of Things Services, HID Global.

Not surprisingly, wait times are closely tied to patient satisfaction – and directly affect patients’ ratings of emergency department (ED) care and the overall inpatient experience.¹ Long wait times also are linked to poor outcomes, with a three-year study showing that 5,449 patients died waiting for beds in National Health Service hospitals.² In addition, just a 10-minute increase in ED wait time increases costs by 6%.³

“The challenge is to orchestrate care to efficiently move the patient from admission to discharge,” Robinton said. “Hospital staff need to know where patients are located as well as where critical resources such as clinicians, beds, intravenous pumps and crash carts are at any given time.”

To create a successful Internet of Things (IoT) strategy, organizations should embrace a comprehensive platform with open, scalable cloud architecture. As such, they can implement an array of IoT technologies that utilize real-time location services (RTLS) to optimize the flow of patients, assets and staff across the enterprise. Over time, additional applications like wayfinding and supply chain management can be added without having to abandon the initial investment.

Quickly moving patients along

Patient wristbands with embedded Bluetooth Low Energy (BLE), a technology that simplifies RTLS deployments, specifically can improve patient flow and reduce frustrating wait times.

“Think about the typical patient experience. You sit in the waiting room for a while. Then, you go into an exam room and wait for a nurse to take your vitals. Then, you wait for the doctor. After the doctor finishes, you might wait for a blood draw and then go to radiology and wait yet again,” Robinton said.

With RTLS-enabled patient wristbands, however, “care teams know where patients are at all points in the patient journey so they can coordinate and collaborate activities based on patient status as well as upon current or anticipated patient populations within departments,” Robinton said.

For example, caregivers know not to send multiple patients to the magnetic resonance imaging (MRI) department when there is no capacity to serve them. In addition, staff members don’t waste resources tracking down patients. They don’t make multiple calls to determine if a patient is still in post-operative care.

Conquering common challenges

Location data from patient wristbands is especially useful when addressing challenges at key points in the care process, such as initial room assignment and shift change.

A close look at how RTLS information can improve the discharge process illustrates this value. Typically, staff members don’t know when a room is empty and may spend valuable time checking to see if the patient has left. However, when RTLS data is integrated into other business systems, hospital staff are automatically alerted when patients are discharged. As such, environmental services immediately can start the cleaning process and turn rooms over quickly, thereby reducing admission bottlenecks and length-of-stay.

Access to location data from patient wristbands also can help with COVID-19 challenges. “Reduced wait times decrease the potential exposure to COVID-19. With fewer people in the waiting area, it is also possible to adhere to social-distancing standards,” Robinton said.



“Being able to measure is the first step to improvement. Cycle-time analyses help pinpoint where common inefficiencies are. So, if you discover that patients are not spending enough time interacting with clinicians and are experiencing 30-minute bottlenecks in MRI, you can re-engineer processes.”

Mark Robinton | Vice President of Internet of Things Services | HID Global

In addition, IoT technologies that track assets can keep tabs on the movement of highly needed vaccines and other medications, while technologies that locate staff can enable better clinician collaboration and track visitors and vendors.

Strategically leveraging RTLS data

Healthcare organizations (HCOs) can improve the patient experience even more through retrospective, forensic analyses of location data. Hospitals can track patient movement from intake to discharge, measuring both wait and engagement times in admissions, exam rooms, pharmacies and pathology departments, among other areas.

“Being able to measure is the first step to improvement,” Robinton said. “Cycle-time analyses help pinpoint where common inefficiencies are. So, if you discover that patients are not spending enough time interacting with clinicians and are experiencing 30-minute bottlenecks in MRI, you can re-engineer processes.”

Implementing multiple technologies simultaneously also garners desired results. For example, HCOs that have worked with HID Global to support such strategic efforts have reduced bed assignment time by 58%, monthly ED diversions from 700 hours to 8 hours and the time required to find equipment from 21 minutes to 5 minutes per nurse, per shift, according to Robinton.

Finally, a strategic approach maximizes return on investment. “IoT in healthcare has a wide variety of applications. If organizations are putting readers into every room, that’s an infrastructure investment that should be leveraged to not only locate patients but assets and staff, as well,” Robinton advised. “The same IoT platform can be used outside of location services for temperature and equipment condition monitoring. So, the return on investment is much better. And with this IoT platform, the data can be integrated, providing the intelligence needed to make the decisions that will optimize the patient experience.”

“IoT in healthcare has a wide variety of applications. If organizations are putting readers into every room, that’s an infrastructure investment that should be leveraged to not only locate patients but assets and staff, as well.”

Mark Robinton

To learn more about how HID Global can help your healthcare organization improve the patient experience with RTLS technology, visit hid.global/Healthcare-RTLS or email iotsales@hidglobal.com.

References

1. Davenport, P.J., O'Connor, S.J., Szychowski, J.M., Landry, A.Y., and Hernandez, S.R. 2017. The relationship between emergency department wait times and inpatient satisfaction. *Health Marketing Quarterly* 34(2):97-112. May 3. <https://doi.org/10.1080/07359683.2017.1307066>.
2. Campbell, D. 2019. Thousands of patients die waiting for beds in hospitals – study. *The Guardian*. Dec. 10. <https://www.theguardian.com/society/2019/dec/10/thousands-of-patients-die-waiting-for-beds-in-hospitals-study>.
3. Woodworth, L., and Holmes, J.F. 2019. Just a minute: The effect of emergency department wait time on the cost of care. *Economic Inquiry* 58(2):698-716. Nov. 5. <https://doi.org/10.1111/ecin.12849>.



About HID Global

HID Global powers the trusted identities of the world’s people, places and things through smart components and cloud services. We make it possible for people and organizations to transact safely, work productively and travel freely. Our contactless identification and sensing (RFID, NFC and BLE) components and solution enabling technologies address the dynamic requirements across multiple industries to wirelessly connect, identify, collect and manage data quickly and accurately across virtually any IoT application.