



Q&A with Polina Braunstein

CEO of Quake Global

RTLS and beyond: Toward full hospital automation

By Gus Iversen

Real-time location systems are an important tool for hospitals. But full hospital automation depends on integrating RTLS with the hospital's other data points and systems. While full automation and its benefits may seem like a distant possibility, it may be in reach for most hospitals today.

HCB News: How should healthcare providers think about the potential of RTLS?

Polina Braunstein: RTLS is critical for putting the right asset in the right place at the right time. But in many ways it is underutilized in healthcare today. Too often RTLS is used as a closed system, feeding a single stream of data points into a dashboard.

True, RTLS can help minimize the time nurses spend looking for an infusion pump or a wheelchair — and those hours do add up. But can RTLS assure temperature monitoring for a sensitive COVID vaccine? Or alert a pre-op team when a room is not only empty but also clean? Can it integrate with systems necessary to make a surgery successful, including room preparation, staging the right instrumentation and anesthesia, while connecting to pharmacy and discerning patient location — and alert everyone in that chain if a patient is delayed or there is a problem with the room? The answer is yes to this and more.

When RTLS is integrated across all existing systems within a hospital — security cameras, communication systems, specimen refrigerators, registration and billing systems — then a hospital meets the need for wide-scale process improvement.

HCB News: Can you give an example of a typical hospital process you think needs improving?

PB: Room rotation is a huge factor. It's impossible for hospitals to generate the proper rotation of patients, staff, surgical teams, and sanitation services without understanding which rooms are open in real time. And not just which rooms are open, but their exact status. Was there a COVID-19 patient in the room? If so, disinfection standards are higher impacting rotation speed.

It's no stretch to say hospitals experience an hour loss per operating room change-over. Preventing a day's worth of losses can enable an additional surgery per day.

Most of those logistics are currently handled verbally—but automating that process can significantly streamline operations.

HCB News: Do you have another example?

PB: Yes, the patient checkout process. It often takes a hospital hours to check out a patient — but so much of that time is unnecessary delay. It should take between 30–45 minutes for check out and to clean the room with RTLS orchestrating synchronized communications between everyone in the workflow chain.

HCB News: What does this take in terms of technology?

PB: Many of these systems are already up and running so it's not as difficult to connect them as people might think. From security footage to asset tracking, and staff allocation to billable events related to milestones in terms of patient flow, to pathology speci-

men process optimization — all of these data streams and more exist. Implementing a system may take a month or two, thereafter process improvement opportunities are truly endless for any hospital.

HCB News: What are the financial implications of this type of automation?

PB: For any hospital use case ROI can be realized in six to 12 months, while also dramatically improving the patient experience, staff satisfaction, and reorientation around continual improvement.

HCB News: How exactly is that return achieved?

PB: It depends on where the hospital starts the automation — in the ICU? The operating room? Wherever you implement such a system, visibility, efficiency and communication are immediately improved across all hospital functions leading to greater, actionable insights.

One area shown to yield immediate and sizeable savings is in specimen tracking. Mayo published its automated specimen tracking results, which recouped \$2 million in labor costs in the first year. This is an important example too, because it touches on the risk of *not* automating. When medical personnel dispense the wrong medication to the patient, or mistakenly lose or even destroy specimen evidence — all of this has patient life-or-death consequences and massive liability for the organization.

RTLS offers important insights, it's true. But genuine operational efficiency is contingent on having access to the total picture.

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