



Case study |  LEE HEALTH

Lee Health Uses Data-Driven Weapons Detection Powered by Evolv to Tackle Provider and Patient Safety in Its Emergency Departments

Lee Health

LOCATION: Southwest Florida

PATIENT CONTACTS: 2 million+ annually

EMPLOYEES: 14,000+

MEDICAL STAFF: 2,500+

VOLUNTEERS: 4,000+

PRACTICE LOCATIONS: 100+

ACUTE CARE HOSPITALS: 4

SPECIALTY HOSPITALS: 2

FOUNDED: 1916

WEBSITE: www.leehealth.org

Solution Snapshot

Goals

- Mitigate provider and staff concerns about the rise in healthcare workplace violence
- Implement weapons detection screening at entrances to all Emergency Departments
- Generate detailed security screening analytics on the number of people passing through entrances daily at specific time intervals
- Provide seamless traffic flow for patients and visitors through security screening and to medical triage
- Ensure a fast and easy secondary security screening process
- Enable staff to monitor the health of screening technology from desktops and mobile devices
- Create a frictionless security screening process for providers and staff
- Analyze security ingress data to assess daily traffic flow and detected threats for senior leadership and staff training

Solution

People

- Evolv Solutions Engineer conducted a site survey for all 6 Evolv Express® system deployments
- Evolv Customer Success Manager worked with the Public Safety team to create a customized training regimen using content from The Bridge and MyEvolv portal

Process

- Configured and deployed 6 Evolv Express systems
- Worked with the Lee Health team to develop ConOps documentation

Technology

- 6 Evolv Express single-lane systems
- Evolv Insights®

Outcomes



Found 160+ guns and 1,000+ knives in the second half of 2023 alone



Screened over 220,000+ patients, visitors, staff, and providers since Evolv deployment



Achieved a 44-second clear rate for secondary screening to enable faster and safer patient triage



Enabled providers to focus on delivering patient care by reducing the threat of weapons



Analyzed traffic flow and threat detection analytics daily and monthly with Evolv Insights



Avoided the formation of lines in front of security screening locations, reducing soft targets



Ability to monitor the health of Evolv Express systems from any location with the MyEvolv portal and mobile app



Developed a custom training program for the Public Safety team

Despite Advances in Security, Gaps Remained

When Robert Sherwood, the Director of Public Safety Technology & Community Based Care at Lee Health, joined the nonprofit healthcare system based in Southwest Florida 13 years ago, its security systems looked much different than they do today.

“When I started here, we had two analog security cameras,” Sherwood reflects. “It was a bit of a hodgepodge when it came to access control and cameras.”

Since he joined the team, Sherwood has led Lee Health in implementing various technology initiatives to improve security and safety. This wasn’t just a task for Sherwood, who was born at Lee Health Memorial years back—this was his way of applying his impressive skillset to improve the collective safety of a hospital that is the backbone of their community. “My role in technology is to make things more efficient and safer for our staff, patients, and visitors,” he says. “We’ve dabbled in several technology innovations such as next-generation security cameras in the children’s hospital and robotics on the clinical side. It goes back to making it easier to deliver care and better care.”

Despite various advances in security processes, significant gaps remained. “In the state of Florida, we have many people with concealed weapons,” Sherwood explains. “Before we started incorporating weapons detection systems into our facilities, we really had no idea what patients had on them.” Sherwood knew that additional work was still needed to minimize the increasing risk of danger to all staff, patients, and visitors.

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The Failings of Handheld Metal Detectors Hit Home

For several years, Lee Health relied on handheld metal detectors to screen for incoming weapons.

However, the security team was unable to check everyone for weapons. “We had to single out people, and the associated bias was something that was a problem,” Sherwood relates. “We wanted a way to screen everyone in the same way, which would eliminate any connotations of bias. Especially since the passage of Florida’s concealed weapons law in July 2023, we need to have the mentality that 90 percent of everyone entering our facilities has a weapon on them. We’re the largest employer in the county and wanted to take a leadership role in safety and weapons screening.”

“We’ve had individuals who have brought weapons into our Emergency Department lobbies and our campuses,” James Magas, Director of Public Safety at Lee Health Memorial Hospital. “This is one of the primary reasons why our administration elected to search for a different security screening approach, seeking a way to stop and deter anyone from bringing weapons into our campus.”

These issues all came to the forefront in 2021 when an individual came to a Lee Health facility and used a weapon to commit suicide. “Fortunately, he didn’t harm anyone else,” Sherwood reports. “But it was an unsettling experience for our staff—that he was

able to get a weapon into the facility. We didn’t want our staff to have that feeling again. We want them to come to work and feel safe in our environment. We have zero tolerance for violence inside out healthcare facilities and feel if you can control what people do in your facility, you can create a better outcome.”



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Evolv “Checked All the Boxes”

Knowing they wanted to institute a weapons screening solution, the Lee Health team went in search of a better approach.

The team did a lot of research online and identified several different technologies that included Evolv. “Evolv checked a lot of our boxes and we decided to test the Express System out,” Sherwood says. “It performed very well during the pilot. We also sought out other healthcare organizations using Evolv. I had a couple of conversations with other organizations about their experience—pros and cons—using Evolv. These reference checks, where Evolv was running in a live environment, sold everyone on Evolv and put us at ease to go forward.”

At the same time, the Lee Health team appreciated the transparency of Evolv on the capabilities of the technology. “Our number one objective was to stop the guns from coming into our hospitals,” Sherwood observes. “We wanted to stop active shooters. The Evolv team was very transparent about the technology’s ability to catch knives—namely, it would catch many but not all. The fact we could catch many was a plus, and we appreciated their transparency.”

Ultimately, there were three reasons why Lee Health selected Evolv. “First, we’re big proponents of data, and the analytics we would get through Evolv Insights was really important,” Sherwood explains. “Second, we needed a screening solution that would deliver a seamless traffic flow. No lines could form in front of our entrances—both the Emergency Departments and main hospital entrances. Finally, we like the footprint of Evolv, especially compared to other technologies like walkthrough metal detectors that have a much larger footprint. We have limited space, especially in our Emergency Departments, and this was an important selling point.”

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Two-Phase Deployment of Evolv

Sherwood and the Public Safety team elected to break the deployment up into two phases.

“The majority of weapons we see coming into our facilities occur in our Emergency Departments,” Sherwood says. “While we want to put Express systems at all of our main entrances as well, we decided to break the deployment up into two phases—the first focused on the Emergency Departments and the second on the main entrances.”

For phase one, Lee Health focused on its six Emergency Departments. “Statistics around the country, as well as in our facilities, show most violent incidents in healthcare start in the Emergency Department,” Sherwood says. “Working closely with an Evolv Solutions Engineer, it was determined that the single-lane Express system met the traffic flow requirements for each location.”

The first system was installed at Lee Memorial Hospital on June 22, 2023. Four subsequent systems were rolled out sequentially Lee Health Gulf Coast Medical Center and Lee Health Cape Coral Hospital on August 7 and Lee Health Golisano Children’s Hospital and Lee Health Park Medical Center on September 18. A sixth deployment follows in early 2024 at Lee Health Coconut Point Medical Center.

“It was mind-boggling to see the first monthly report that we generated with Evolv Insights. I saw the number of weapons we detected, and I thought, ‘Wow! This system is amazing.’”

- Robert Sherwood, Dir. of Public Safety Technology & Community Based Care, Lee Health



Onboarding Evolv: Awareness, Training, and ConOps Documentation

In advance of going live with Evolv, Lee Health wanted patients and surrounding communities to know about the deployment of the Express systems in its Emergency Departments.

The launch of Evolv at Memorial Hospital was accompanied by signage and communications—both internal and external. “We invited the media to come out and see it in action,” Sherwood reports. “We spoke about why we were implementing them at each Emergency Department and why we place such a high priority on the safety of patients, visitors, and staff.”

For training, Lee Health’s Public Safety staff, and Evolv’s Customer Success Manager, Kiana Dozier, collaborated with Lee Health’s Public Safety Systems Training Coordinator to implement a detailed training curriculum. They leveraged training materials from the MyEvolv portal and training resources from Evolv’s virtual training academy, and The Bridge, Evolv’s user community and onboarding center.

At each hospital, the Public Safety team underwent a comprehensive three-week training program. For the go-live at each facility, the Evolv team was onsite to address any last-minute questions and to supervise the teams at each location until they felt comfortable managing the deployment on their own.

“The training regimen Lee Health instituted was very impressive,” Dozier says. “Robert [Sherwood] and his team were proactive in utilizing the training materials I provided through the MyEvolv portal Knowledgebase and The Bridge. The resulting training module is outstanding and customized for their environment.”

In addition to all operational aspects, training included teaching the Public Safety staff how to set up, tear down, move, and store each Express system. For the deployment of Evolv Insights, Dozier worked with the Lee Health Public Safety team to set up regular reports and to ensure they understood how to create custom reports to meet their needs.

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- Kiana Dozier, Customer Success Manager, Evolv Technology



Easy to Deploy, Easy to Manage

Lee Health found the deployment of the Express systems quite easy.

"Assembling the systems is straightforward and we documented the process in our ConOps documentation," Sherwood observes. "Just as importantly, we needed a portable technology that would allow us to tear down and reassemble the Express systems in a new location. For example, if we want to move a system to a different entrance for a day due to an event, we can do so quickly and easily."

Secondary screening is also much easier with Evolv than with other technologies they reviewed, such as walkthrough metal detectors. "The red box on the Evolv tablet shows our Public Safety team exactly where the potential threat is located on the person's body or bag, and they can focus on that area," Magas explains. "With other solutions such as walkthrough metal detectors, this level of intelligence and guidance is not available."

It's All About the Data

Evolv Insights was seen by Lee Health as a critical piece of the Evolv solution during the solution process.

Accordingly, Dozier worked with the Lee Health team to set up and configure Evolv Insights during the onboarding process. "We developed a custom monthly report using Evolv Insights for my senior executive who shares it throughout the health system," Sherwood explains. "The MyEvolv portal is very easy to use. The automated reporting is useful for day-to-day operational updates to the Public Safety team and me."

Lee Health uses different data captured in Evolv Insights. Traffic flow and weapons detected are at the top of the list, but Sherwood and the Public Safety team also leverage data captured on nuisance alarms and tags. "I'm a huge data person, and the Evolv Insights component is a central piece for me," he says. "We also know where people are typically placing weapons and use this data to train our staff on where to look."

Lee Health also leverages the analytics in Evolv Insights to compare outcomes between different Express system locations. "The administrators can compare analytics between each location to assess how individual security guards are doing in terms of the amount of time it takes for a person to go through secondary security screening, how long it's taking them to tag, and other factors that contribute to their security screening process," Dozier explains. "Based on this information, Lee Health can focus on follow-up training and provide resources as necessary for those who are struggling."

Insights Into Emergency Department Ingress

Before the Evolv deployment, Lee Health had no idea how many people entered its Emergency Departments.

“We had a visitor management system, so we knew how many visitors were checking in but we didn’t know how many people in total were entering our facilities,” Sherwood relates. “With Evolv, we know exactly how many entered our Emergency Departments and when they entered. Last month, for example, I know we had 70,000 people come through our Emergency Departments.”

Having this level of entrance data is helpful to Sherwood. “We have seasonal fluctuations with people coming down from northern states during winter months, and this data informs each Emergency Department on staffing requirements,” he says. “It is useful not only for planning during specific times of the year but also at specific times of the day. For example, if we see more people coming through screening between 10 a.m. and 2 p.m. versus early morning, we can make staffing adjustments to reflect that. The same is true of comparisons between traffic in January versus July.”

The Deterrence Impact is Substantial

The benefits of Evolv are also seen in the deterrence of weapons from coming into facilities.

“We have signs around each of our facilities promoting a weapons-free environment and that everyone entering an Emergency Department must pass through weapons screening,” Magas says. “We regularly see people walk up to the door, read the sign, see the Express system, and return to their vehicle to deposit their weapon. While the ‘deterrence element’ is not captured in the Evolv Insights analytics, we anecdotally know it is having an impact. Deterrence also occurs through word of mouth in the community, where more and more people become aware that we have weapons screening in place.”





The Elimination of Screening Bias

With Evolv, everyone coming into an Emergency Department gets screened.

“This wasn’t the case when we used handheld metal detectors,” Magas describes. “Evolv ensures that everyone gets screened for weapons without bias.” Whether an employee, patient, or visitor, everyone entering the Emergency Department must pass through the weapon detector. Even checking everyone, the delays from the handheld metal detectors are long gone.

Magas also observes that the speed at which they can screen everyone entering the Emergency Department is key. “It’s a seamless flow through the Evolv lane for those who don’t set off an alarm, and for those who do, the secondary screening check is fast and easy,” Magas says. “The red box on the Evolv tablet shows the security guard the exact location of the detected threat. If it was a nuisance alarm, the security guard tags the object on the tablet and the person continues into the Emergency Department lobby. If the object is a weapon, the security guard stores the weapon in a secure location from which the patient can retrieve the weapon upon leaving our Emergency Department. If the person is a visitor, then they are asked to return the weapon to their vehicle before entering.”

For secondary checks, the Public Safety team is very impressed. Using Evolv Insights, Sherwood can see exactly how much time it takes from an individual alerting to completing a secondary screening check—something crucial for hospitals. “We’re achieving an average clear rate of 44 seconds,” Magas reports. “This fosters the great experience we want patients and visitors to have whenever they come to one of our care facilities, but we still get our job done and mitigate that risk.”

“

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Evolv Software Updates are Frequent and Innovative

A few months into their deployment, Lee Health learned of a new update available to their Evolv Express software—something they were eager to try out.

“As an organization, we don’t always want to be on the latest release of the software, and when we were ready, Evolv was here to help us go through the updates” Sherwood notes. “With the latest Evolv update (7.0 release), we now control our update process—which we appreciate.” Dozier adds, “The Lee Health team can schedule software updates whenever they want to do so. They no longer need to go through the Evolv team to do it. The updates can be managed through the MyEvolv desktop app or our mobile app. In addition, the administrators for Lee Health can see the health of the Express systems, at all six locations, right there on their mobile phones.”

Beyond software updates, Lee Health is excited about the real-time training capability in the Evolv tablets used by the Public Safety team. “We no longer need to pull a member of the Public Safety team on their day off to train them,” Sherwood says. “We can do on-the-spot training right there on the Evolv tablet. The staff likes it because they don’t need to come into one of our facilities for training, while we find it very useful because we don’t need to allocate budget to cover overtime.”

The Results are in the Data

Since deploying Evolv, Lee Health has seen high rates of weapons being detected in its Emergency Departments.

This is something that Sherwood and the team aren’t necessarily shocked to see in Florida, but are surprised at the numbers nonetheless, as it reflects what may have been previously entering the hospital campus unknowingly. “We’re identifying a lot of concealed weapons the size of your hand,” Sherwood says. “We’re also detecting a lot of knives. At our Memorial Hospital Emergency Department, we’re finding around 60 knives alone per month. While Evolv told us from the get-go during our sales conversations with them that the Express system cannot detect all incoming knives, we’re quite pleased with these results. The accuracy of Evolv has been excellent. When an alarm occurs, we’re able to resolve the cause quickly and easily. Evolv makes us safer.”

For the second half of 2023, Lee Health detected 157 guns and over 1,000 knives. “We’ve screened over 222,000 patients and visitors with Evolv to date,” Sherwood reports. “It was mind-boggling to see the first monthly report that we generated with Evolv Insights. I saw the number of weapons we detected, and I thought, ‘Wow! This system is amazing.’”

There is No Price Tag on Safety—But Positive Feedback Helps

Providers and staff were very enthusiastic at the deployment of Evolv.

“When the providers and staff at Gulf Coast Medical Center witnessed the Express system go live in Memorial Hospital's Emergency Department, they got very excited, knowing their Emergency Department was next on the implementation roadmap,” Sherwood says. “You could see the excitement on their faces and their body language. Our leadership had the same reaction when we started delivering monthly reports to them using Evolv Insights analytics. They were able to see everything we were detecting and removing from our Emergency Departments before patients and their family members and friends entered.”

“We knew security screening has been a top concern of our staff and providers for a long time,” Magas continues. “Evolv helps us remove the threat of a patient or family member bringing a weapon into our Emergency Departments and enables our nurses and doctors to focus on providing the care the patient needs. You cannot put a price tag on their safety. The benefits also extend to patients and family members, removing the likelihood of someone doing self-harm with a weapon.”

“Public safety is my team's number one priority. Our staff members know we are doing everything we can to deliver on this promise every day they come to work—and Evolv plays an important role when it comes to our Emergency Department. I've had numerous staff members come and thank us for introducing Evolv into our facilities. It's a great feeling to receive this feedback.”

- James Magas, Director of Public Safety, Memorial Hospital, Lee Health System



Public Safety Made Front and Center With Evolv

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“Our staff members know we are doing everything we can to deliver on this promise every day they come to work—and Evolv plays an important role when it comes to our Emergency Department. I’ve had numerous staff members come and thank us for introducing Evolv into our facilities. It’s a great feeling to receive this feedback.”

“Now that we’re live with Evolv, we get other healthcare providers contacting us and wanting our opinion on the deployment,” Sherwood adds. “I invite them to come to our facilities to see them working in a real-world environment, and I tell them until I am blue in the face how great the experience has been with Evolv. Seeing the systems working in person clears their mind of any concerns. Seeing is believing—and we’re pleased to be one of the first in Florida healthcare to demonstrate what is possible.”



LEE HEALTH
Lee Memorial Hospital

Contact us to learn more about helping to create
safer zones where you live, learn, work, or play.

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