



Edward-Elmhurst Health Protects Staff and Patients Using Technology to Prevent the Spread of COVID-19

The COVID-19 pandemic has forced hospitals to quickly adapt in response to the rapid spread of the deadly virus. Across the U.S., hospitals experienced an overwhelming volume of contagious patients and uncertainty about transmission rates. At the same time, personal protective equipment (PPE) and testing shortages created a high risk environment for healthcare workers on the frontlines.

Studies estimate that up to 40% of all healthcare workers have been exposed to COVID-19. This risk posed serious concerns about staff safety and having enough employees to treat higher than normal patient volumes.

“There is no expiration date for COVID-19. We must stay vigilant in our ongoing response until there is an effective treatment or vaccine widely available,” said Sherri Hill, Associate Vice President, Quality and Patient Safety, Edward-Elmhurst Health. “As we re-open our doors for critical and elective care procedures, a scalable exposure tracking system is an essential part of keeping staff safe and delivering quality care.”



SAFETY INFRASTRUCTURE AT EDWARD-ELMHURST HEALTH

In 2019, Edward-Elmhurst Health launched SwipeSense Electronic Hand Hygiene Monitoring, Asset Tracking, and Nursing Insights applications, system-wide. There are:

3,647

staff members outfitted with SwipeSense Caregiver Badges

1,667

mobile medical assets tracked with SwipeSense Asset Tags



Edward Hospital ICU Nurses

*As of June 2020

The Future of Safety Requires Data-Driven Technology

Under pressure to act fast, the forward-thinking team at Edward-Elmhurst Health, a 736-bed health system with three hospitals in the west and southwest suburbs of Chicago, realized the urgent need to implement an automated exposure tracking system to mitigate the spread of COVID-19.

“

We were racing against the clock to save lives and needed an immediate, reliable, data-driven solution to protect frontline staff. I reached out to our partners at SwipeSense with the idea that employee and room-level movement data already being captured through their platform in our facilities could be used to conduct automated contact tracing. SwipeSense worked extremely fast to provide data that allowed us to determine staff that came into contact with an infected patient and the duration of time, in minutes to which they were exposed, significantly reducing the time to identify and notify staff of potential exposure.”

Raj Iyer, Chief Data Analytics Officer at Edward-Elmhurst Health

Health systems, including Edward-Elmhurst, traditionally relied on manual exposure tracking processes for contagious outbreaks like Pertussis and Hepatitis A.

In the event of an exposure, Electronic Health Record chart reviews, pen and paper documentation, and staff recollection was used to determine who came into contact with an infected person. These laborious methods take hundreds of hours, involve several staff members, and are often deemed unreliable. With an influx of contagious patients, staff are continuously at risk.

Technology-enabled contact tracing is the most scalable and effective way to mitigate spread.

SAMPLE CONTACT TRACING CASE

Patient A



COVID-positive Patient A



74 Employees exposed and notified of potential risk in expedited manner



26 employees presented symptoms and tested for COVID-19



0 employees confirmed COVID-positive

Leveraging SwipeSense Data to Reduce Harm

By combining SwipeSense data with patient interactions from the Epic Electronic Health Record (EHR), the Business Intelligence team built an in-house dashboard, that was used to identify any employee exposed to COVID-positive patients within 24 hours of exposure.

“The dashboard has been an extremely effective way to track exposed employees, and I can certainly see this being used in the future to reduce the spread of other infectious diseases,” said Mayra Fox, Senior Project Manager, Data Governance, Edward-Elmhurst Health.

Automated Contact Tracing can:



Generate initial exposure list within minutes, for employee positive cases



Quickly identify at-risk patients that the infectious employee cared for



Quantify risk based on the number of times an employee entered an at-risk room, and the duration of time, in minutes at which they spent with the patient



Accelerate exposure response time allowing for immediate isolation and monitoring

Increased Healthcare Capacity and Reduced Risk of Harm

A combination of interventions were put in place at Edward-Elmhurst Health, including the COVID dashboard, universal masking, isolation areas, and other safety measures, all of which were critical to reducing the spread of COVID to frontline staff and patients.

As a result of their steadfast commitment to safety, Edward-Elmhurst has been able to manage the number of employee cases, allowing sufficient hospital capacity.

Data represents Edward Hospital and Elmhurst Hospital data; March 16, 2020 - June 5, 2020

432

of COVID-19 patient cases where the Contact Tracing dashboard was used to identify employee exposure

2,421

of employees identified and notified of potential risk as a result of using the Contact Tracing dashboard (some employees may have been exposed to more than one COVID positive patient)

652

of exposed employees who presented symptoms and tested for COVID-19

17%

% of exposed employees that tested positive for COVID-19 (COVID-positive employees followed the recommended CDC guidelines for proper isolation)

< 1%

% of total exposed COVID-positive employees that were isolated at the end of the three month period (March-June 2020)

Safety Infrastructure is Essential for Recovery and Post-COVID Growth

In addition to providing timely, accurate data to reduce risk for staff and patients, an automated contact tracing tool is valuable in supporting essential safety infrastructure and business needs, including:



PPE Compliance

Even after a 100% universal masking policy was put in place, Edward-Elmhurst Health continued to use the dashboard for every COVID positive patient. Through the screening process, they learned that employees might have removed their masks during breaks, underscoring the equal importance of contact tracing with PPE.



Boost Critical Revenue

As elective surgeries resume, professional contact tracing is key in demonstrating operational readiness to staff and patients that it's safe to return.

Consumers control over \$370 billion in out-of-pocket health care spending, and will need to see safety infrastructure in place before returning.



Rebuild Consumer Trust

When seeking care, patients trust that their experience will be safe.

Today, patients are taking extra precautions to ensure their own safety, and should not have to add 'never events' to their list of concerns when visiting a hospital.

“The ability to quickly identify, screen, and communicate at-risk individuals allowed us to take a proactive approach and reduce the number of COVID-positive employees due to patient exposure.”

Raj Iyer

Chief Data Analytics Officer at Edward-Elmhurst Health



Get Started

Learn how the SwipeSense safety platform, including Electronic Hand Hygiene Monitoring, Asset Tracking, Nursing Insights, and Contact Tracing can support your organization's efforts to build a sustainable safety infrastructure.

Visit www.swipesense.com to learn more