

Community Hospital



CONTACT TRACING CASE STUDY

One of the first two U.S. patients with Middle East Respiratory Syndrome (MERS)¹ walked through the doors of Community Hospital in Munster, Indiana on April 30, 2014. It was a high-profile, nationally publicized event, with heavy involvement from the Centers for Disease Control and Prevention (CDC). The hospital turned what could have been a public relations crisis into a playbook for quickly identifying and mitigating risk.

UPENDING AN ORDINARY WORK DAY

John Olmstead, RN, MBA, FACHE, the director of surgical and emergency services at the time, remembers that day as a typical workday interrupted by a call to "clear your schedule and report to administration." Trekking across the hospital, he tried to imagine what could generate such a dramatic call.

In the administrative offices, he found more than a dozen coworkers on the phone with officials from the CDC. They were told a patient had been diagnosed with MERS, a viral respiratory illness with, at the time, a 50 percent death rate. CDC officials told Community Hospital staff, "Life as you know it is about to change."

INSTALLATION HIGHLIGHTS:

Midmark CareFlow™ RTLS Solutions

- Nurse Call Automation
- Staff Duress (ED)

CONTACT TRACING: MANAGING CONTAGION EXPOSURE

Olmstead and his team were tasked with uncovering how many people had been exposed to the contagious patient. CareFlow™ RTLS location data, interfaced to the hospital's nurse call system, showed all staff members who had been in the patient's room.

In comparing CareFlow RTLS-reported visits recorded in the nurse call system to self-reported visits to the patient's room, they found caregivers underestimated their contact with the patient by an average of 58 percent.

Don Fesko, CEO of the hospital, told Modern Healthcare, "We could easily take anyone who was on duty, out of duty, and quickly explain to them what was going on."²

MORE THAN JUST CONTACT: ASSESSING EXPOSURE TIME

Additional data that proved to be helpful—both on the scene and for ongoing CDC studies—was how long each staff member was in contact with the patient. CDC data revealed that the least amount of time to be in contact with a contagious person before contracting a flu-like virus such as MERS is 11 minutes.

Because all people wearing RTLS badges had their interactions recorded, reports showed Community Hospital what they needed to know: No employees had been in contact with the MERS patient for more than seven minutes.

"We knew who was exposed, how long they were exposed and who was NOT exposed," Olmstead says. "We were able to confidently communicate that to the public, which was a big deal. We never would have had (that information) without the RTLS badges and the nurse call reports."

| Primary exposures occurring at or before 11:59PM by location | | | | | | | |
|--|----------------|---------|------------|-----------------------------|-----------|--------------|------------------|
| Name | ID | Group | Total time | Location | # in loc. | Time in loc. | Longest exposure |
| Aubrey Maddoux | 7374972132818 | Staff | 152.3 | AL1 Services Lab Draw 1 | 19 | 53.7 | 18.0 |
| | | | | AL1 Services Lab | 27 | 98.6 | 14.6 |
| Secondary exposures via Aubrey Maddoux by location | | | | | | | |
| Name | ID | Group | Total time | Location | # in loc. | Time in loc. | Longest exposure |
| Carole Nachbar | 89850151877433 | Staff | 43.1 | AL1 POD E Breakroom | 2 | 42.7 | 41.7 |
| | | | | AL1 Services Nurse Office 2 | 2 | 0.4 | 0.3 |
| Devon Egleston | 2896544942342 | Staff | 39.8 | AL1 POD E Breakroom | 3 | 38.0 | 32.2 |
| | | | | AL1 Services Lab | 1 | 0.2 | 0.2 |
| | | | | AL1 Services Manager Office | 1 | 1.3 | 1.3 |
| | | | | AL1 Services Nurse Office 2 | 1 | 0.3 | 0.3 |
| Frances Augare | 2106922872854 | Patient | 26.8 | AL1 Services Lab Draw 1 | 11 | 26.8 | 8.9 |
| Wayne Vannah | 62175619836501 | Staff | 18.7 | AL1 POD E Breakroom | 1 | 12.3 | 12.3 |
| | | | | AL1 Services Manager Office | 1 | 6.4 | 6.4 |
| Ashley Couto | 36632037300822 | Patient | 18.0 | AL1 Services Lab Draw 1 | 2 | 18.0 | 17.7 |
| Earnest Debauche | 76245850611950 | Patient | 17.9 | AL1 Services Lab Draw 1 | 2 | 17.9 | 17.6 |
| Opal Klindworth | 62456512686528 | Patient | 16.8 | AL1 Services Lab Draw 1 | 2 | 16.8 | 13.8 |
| Kelly Graboyes | 52155393558584 | Patient | 12.7 | AL1 Services Lab Draw 1 | 2 | 12.7 | 9.4 |
| Mya Dobert | 76664352705888 | Staff | 12.1 | AL1 POD E Breakroom | 1 | 4.5 | 4.5 |
| | | | | AL1 Services Lab Draw 1 | 2 | 4.3 | 2.8 |
| | | | | AL1 Services Lab | 2 | 2.6 | 2.2 |

Exposure reporting from CareFlow Analytics provides valuable data on direct interactions, as well as secondary and tertiary exposures. This is critical information that is missed through non-automated contact tracing.

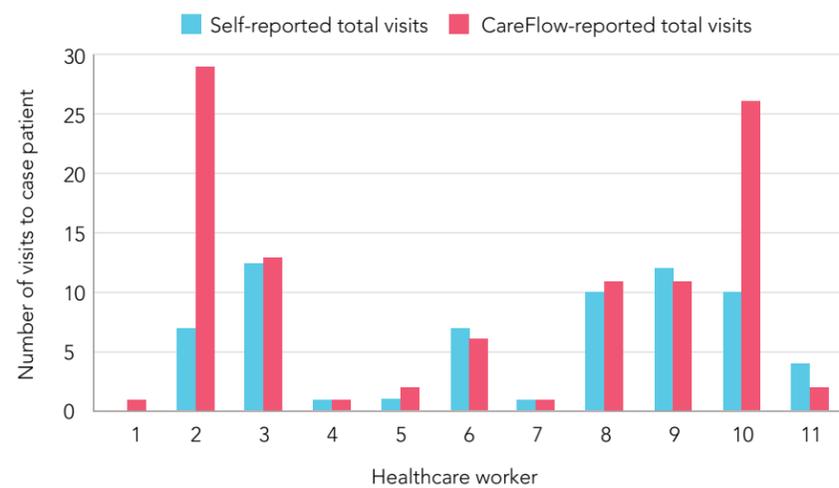
Note: Information in the above report is fictitious for illustration purposes only.

ACCURATE DATA: SOLIDIFYING PUBLIC CONFIDENCE

In the following days, Community Hospital staff and representatives from the CDC gave numerous updates to the press, which had congregated outside the hospital. In each briefing, they reiterated that there were no new

infections, that everything was under control, and that the public was safe.

"We were asked the same question 100 times," Olmstead recalls. "How do you know that people weren't exposed? We were able to confidently tell them, because we had data."



Community Hospital compared how many times staff members remembered entering the MERS patient's room to their actual visits, as recorded by CareFlow RTLS.



The MERS situation was a high-profile, nationally publicized event, with the news media descending on Community Hospital.

The headlines trumpeted their success: "How an Indiana hospital got it right when MERS showed up at the door," (*Washington Post*³); "Hospital details rapid response to MERS patient," (*Modern Healthcare*⁴); "How Indiana Hospital Contained MERS Outbreak" (*InformationWeek*⁵).

LAYING THE FOUNDATION: BEYOND PROCESS EFFICIENCY

"Ironically, everything that helped us had nothing to do with preparing to handle a deadly disease," says Olmstead. "It really had nothing to do with disaster planning at all."

In 2009, Community Hospital embarked on a major process improvement journey to improve performance benchmarks, reduce staff turnover and boost patient satisfaction scores. Hospital leaders worked first with people, then focused on patients, and finally, processes.

"If you don't have the people in place, and they don't have the equipment and tools to take care of the patients, you're not going to improve the process," Olmstead explains.

SAFETY FIRST: MORE THAN A 'PANIC BUTTON'

Safety was a prime concern when it came to retaining quality staff.

"We were worried about violence in the ED, and the safety of our staff. You turn on the news and you see it everywhere—in the schools, in the malls. The violence is terrible. We asked ourselves, 'What's the best system we can put in place to take care of our people?'"

Staff members in the Emergency Department wear RTLS locator badges that feature a "panic button." When they feel threatened, they simply press the button and the CareFlow RTLS Staff Duress software triggers an alarm to let people know who they are and where they are.

When Security officers hear the alarm, they glance at the CareFlow Enterprise View® Floorplan, a blueprint of the Emergency Department, where the exact location of the staff member needing help is highlighted.

NURSE CALL INTEGRATION: ENHANCING CARE DELIVERY

CareFlow RTLS also seamlessly interfaces with the hospital's nurse call system. The interface not only enables the automatic cancellation of calls but also automatically documents nurse-patient interactions for reporting.

"This is the neatest thing in the world," Olmstead says of the system's ability to automatically cancel patient calls. "Instead of paying attention to the button on the wall, you can focus all your attention on the patient."

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John Olmstead, RN, MBA, FACHE
Director of Surgical Services and Emergency Services
Community Hospital

PUTTING PATIENTS FIRST

Olmstead stresses that Community Hospital didn't invest in technology because of MERS, Ebola or the next superflu. "We wanted to take care of our people and our patients ... it is the right thing to do."

1 "MERS in the U.S." Centers for Disease Control and Prevention, 2019
2 "Indiana hospital prepared when deadly MERS virus shows up." Modern Healthcare, May 10, 2014.
3 "How an Indiana hospital got it right when MERS showed up at the door." The Washington Post, May 12, 2014.
4 "Hospital details rapid response to MERS patient." Modern Healthcare, May 6, 2014.
5 "How Indiana Hospital Contained MERS Outbreak." InformationWeek, May 8, 2014.



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