CONTACT TRACING CRITICAL TO CONTAINING THE SPREAD OF COVID-19

HOW TECHNOLOGY MAKES IT SCALABLE AND AFFORDABLE

When the novel coronavirus came to the United States, senior living communities and skilled nursing facilities quickly became hot spots. The COVID-19 pandemic put a spotlight on the challenges communities often face in containing highly contagious infections.

Due to the nature of congregate care settings, senior living providers needed a better way to identify at-risk residents and prevent the spread of illness. Next to testing, contact tracing could be the most effective way to stem the spread of illness.

Contact tracing traditionally has been a manual and cumbersome process. Depending on the size of the senior living community, completing an analysis and putting the necessary protocols in place could take a full day. The process requires capturing, for a two-week period, all of the places that a resident has been and for how long, including identifying the visitors, staff members and other residents with whom they have been in contact. Most of this information comes from the memories of residents and staff. And the process needs to be followed every time someone tests positive.

ENTER TECHNOLOGY

To replace the manual process, senior living operators need technology that is scalable, affordable, faster, more accurate and can be used across communities.

Contact tracing already existed, of course, but now the need for it is urgent, according to Malcolm Graham, the chief technology officer at Sentrics.

"If you can implement a solution based on the infrastructure you have today, that's very helpful," he said, adding that communities that already use access control devices or resident wristbands may be able to leverage that technology for contact tracing and accelerate its adoption.

To be effective, contact tracing solutions must perform three functions:

- Identify people at risk quickly and easily.

- Support case management protocols.

- Minimize the spread of infection.

REAL-TIME LOCATION SYSTEMS IDENTIFY THOSE AT RISK

Real-time location systems, or RTLS, are not new technology, yet COVID-19 provides the perfect scenario for their broad use.

"Before COVID-19, RTLS helped communities identify the location of their residents. It now plays a critical role in helping communities identify the residents and employees most likely exposed to the infection in a profound and accurate way," Graham said.

RTLS captures where people are, with whom, and for how long. This is the exact information a community needs to know when someone has a positive COVID diagnosis, he added.

SUPPORT FOR CASE MANAGEMENT

Once you have identified a positive case, you need to act quickly. Response time is key to avert a crisis and minimize risk. Technology with an integrated case management application makes action seamless.

"A community's ability to track cases—and the management protocols—at the community, region, owner and even corporate level, is critical for a large senior living community," said the CEO of a national provider. "Our operators need to drill down into the management of individual cases— exposure risk, protocol parameters such as isolation and quarantine timeframe, health status and history—as well as identify the bigger picture of cases across an organization," he added.

"Manually processing this information could take a full day. That's a whole day away from the person's normal job," the CEO said. "Technology makes this process fast and simple and allows operators and caregivers to act quickly."

PREVENTING SPREAD

Technology also can help a community prevent the spread of any infectious disease once it has penetrated the outside walls of the building. Geofencing, which is a component of RTLS, creates an invisible perimeter around a physical space, providing the ability to limit access in or out of that space. For a senior living community, the system can limit access to a resident apartment and send an alert if someone tries to exit or enter that space. For caregivers, it also could notify them to put on the appropriate protective gear before entering a space, a more dignified approach than placing a sign on the door.

Communities could use this same technology to enforce social distancing by creating room occupancy limits, Graham said. "You can, in essence, put geofences around locations, set occupancy at a certain number, and send an alert to the nearest caregiver if that number is exceeded. Both the location and the restrictions are adjustable variables."

KEY CONSIDERATIONS

When looking at the scalability of contact tracing, the senior living CEO said that accessible hardware, a support team and the ability to quickly install technology in multiple locations are key.

Important operational points include ease of use and the ability to adopt the technology as a standard.

Affordability is another major consideration. Technology that performs other life safety functions in addition to contact tracing edges out other options because additional hardware easily could double a

capital expenditures budget.

For those thinking about leveraging RTLS for the first time, Graham cautioned that the application and broad-based use must be carefully considered.

"RTLS rely on sophisticated communications networks to capture and identify location accurately. WiFi, Zigbee and Bluetooth solutions all work," he said. "It's important, however, to consider applicable standards and all of your needs—sharing information across a network for clinical, medical, nurse call, other life safety-oriented systems, and even back-office and resident engagement needs—when choosing your solution.

"Some of these applications, when run on the same network, cause a lot of problems," he continued. "A network running fun applications for the community, such as Netflix or Hulu, could affect your ability to successfully do important things that are related to life safety."

Sentrics recommends Zigbee, a wireless network that allows itself to "heal" if any one mode fails. Unlike a wireless network, which will go down if a device fails, Zigbee simply creates a new route and keeps running, Graham said.

A 'COVID-READY' COMMUNITY

Communities now use being "COVID-ready," which includes building design and technology, as a differentiator. Design can make it more difficult for disease to spread and also can aid contact tracing.

Elevate Senior Living, a joint venture between American Healthcare Management Group and Spellman

Brady & Co., is one such COVID-ready community.

Joseph Jasmon, co-founder, CEO and managing partner of AHMG, a Florida-based consulting firm, said Elevate communities use a small-house concept, have 96 to 104 units and are 55,000 square feet.

Six neighborhoods each have private rooms for up to 16 residents, plus multi-use common spaces. When it comes to illnesses such as COVID-19, Jasmon said, the design allows communities to isolate a neighborhood easily and not affect an entire building.

The Elevate concept was in the works before COVID-19 as a way to create efficiencies in senior living.

"We were thinking about someone catching a bad cold or flu, the need to isolate them and make it easier so you're not impacting an entire building," Jasmon said.

There is no right answer when it comes to managing infectious diseases such as COVID or the flu. Every provider needs to make choices about what best solves its problem at a cost it can afford.

In a senior living environment, which encourages and enables social interactions and engagement, technology makes disease management much easier.

One thing is certain, Graham said: "Communities ahead of the game are those that can adapt the technology they already have for this use and even situations that occur every year, such as flu outbreaks, shelter-in-place or location management protocols." ∎

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