Technology:
Changing the future

Workplace cybersecurity

Create a 'culture of security' to protect your organization
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Alexa, are you HIPAA-compliant?

The new answer may be 'Yes'

Photo: Amazon

By Lois A. Bowers

Alexa, the Amazon virtual assistant increasingly found in devices in senior living communities across the country, now is capable of transmitting and receiving protected health information, Amazon announced in April. Its new HIPAA-compliant status means that senior living and care providers and the residents they serve may find more reasons to use enabled devices.

The company has been working with six organizations — including two parent organizations of senior living and supportive housing providers — as part of the invitation-only program. The organizations in which they develop "skills" that let users issue voice commands to Alexa to complete tasks such as checking the status of home delivery of a prescription, scheduling medical appointments, looking up their blood glucose readings and blood glucose measurement trends, and managing health improvement goals.

"These skills are just the first step in making it easier for customers to manage their healthcare needs using just their voice," Rachel Jiang wrote in a post on an Amazon website announcing the launch of a "skills kit" for HIPAA-covered entities and their business associates. "We're excited to see what developers build next."

One of the six companies involved in the program is Atrium Health (formerly Carolinas HealthCare System), with a care continuum that includes nursing homes, home healthcare and hospice and palliative care. For now, the Atrium Health skill's focus is on helping customers in North Carolina and South Carolina locate an urgent care location near them and schedule same-day appointments.

When asked whether Atrium Health plans to develop a skill for long-term care settings, a spokeswoman for the organization told *McKnight's Senior Living*: "Atrium Health is committed to expanding the use of voice technology everywhere — at home, in the hospital, at the doctor's office. Our guide will be to find the best places that make accessing and managing healthcare easier. We haven't targeted any one population yet but are looking at all areas."

Another of the six companies is Providence St. Joseph Health, a health system that includes Providence Health & Services, which operates eight independent and assisted living communities in four states; 13 nursing homes and transitional care facilities in four states; two California skilled nursing facilities operated by affiliate Facey Medical Group; and supportive housing for older adults, disabled individuals and others in three states.

Through the health system's Swedish Health Connect skill,

customers can find urgent care centers near them and schedule same-day appointments at Providence and Swedish Express Care Clinics in the greater Seattle area and across 22 clinics in Washington. Providence St. Joseph Health said it plans to expand its Alexa skills to an additional 15 Providence Express Care locations in Oregon and is exploring new skills development and further expansion throughout its seven-state service area.

Additional companies with skills in the Amazon program are Express Scripts, Cigna Health Today, My Children's Enhanced Recovery After Surgery (Boston Children's Hospital) and Livongo.

"In the future, we expect to enable additional developers to take advantage of this capability," Jiang wrote.

Use of assistants growing

A recent AARP survey found that almost one in seven Americans aged 50 or older owns technology enabled with a personal

New uses for virtual assistants in some areas include checking on the status of prescription delivery.

assistant such as Google Home or Amazon Alexa. Of course, such devices have a strong — and growing — presence in senior living.

Michelle Bohreer, who became the leader of the National Senior Campuses Board of Directors in April, told *McKnight's Senior Living* that the company hopes that an increased use of technology in its communities will not only attract older baby boomers but also tap into the potential to increase connectivity, safety and convenience for all residents.

"We really want to go toward a 'smart home,' so when a resident walks in their apartment, they can control their apartment through the use of their voice and the usage of technology" — for instance, to control lights and appliances, she said.

National Senior Campuses is not alone. Virtual assistants increasingly are being integrated into units for long-term care residents, according to Lisa McCracken, senior vice president of senior living research

and development at Ziegler.

"It is important that senior living organizations designate resources to invest in these technologies and establish leadership positions to oversee strategic innovation and technology adoption," she said.

Civitas Senior Living, Kisco Senior Living and Thrive Senior Living are just some of the organizations that have tested or integrated the devices into their communities, sometimes through partnerships with technology companies serving the industry that have incorporated the voice assistant into their platforms. Such technology benefits staff members in addition to residents, according to Thrive President Les Strech.

"Integrating technology into our communities is a basic, yet powerful way to help our residents feel more connected," he said. "It allows our team members to spend less time managing logistics and more time building relationships, ultimately improving quality of life for older adults." ∎

Virtual assistants can improve quality of life for residents by freeing up worker time that formerly would have been spent managing logistics.

Tech investment targets residents, caregivers

Health and wellness, convenience, workforce uses dominate plans

By Kimberly Marselas

Big Data continues to drive technology investments in the senior living and skilled care markets, but resident and caregiver demands also are fueling interest in new types of workforce and healthcare innovations.

Electronic health records and point-of-care systems remain high-interest items, according to both the 2018 LeadingAge Ziegler 200 report and the forward-looking Ziegler CFO Hotline survey released in February. Increasingly, however, providers are investing in tools that make it easier to manage operations, engage residents and communicate with clinical partners.

"We are focusing increasingly on that smart data and data analytics, and embedded within that, there are companies acquiring other companies and aiming to be a multipronged solution for you," said Lisa McCracken, senior vice president of senior living research and development for Ziegler. "There can be a lot of cool gadgets out there, but the senior living environment doesn't have the budget just for bells and whistles. They need a solution."

Help meeting health goals

Health and wellness tools — including medication management and telehealth technologies — can help providers meet regulatory standards or reimbursement goals.

Majd Alwan, Ph.D., senior vice president of technology at LeadingAge, and Lisa McCracken, senior vice president of senior living research and development at Ziegler, talk tech trends.

Photos: LeadingAge, Ziegler

Use of telehealth for either physical or behavioral health monitoring hit 39% in the latest LZ 200 listing of operators.

As for other trends, Majd Alwan, Ph.D., senior vice president of technology for Leading-Age, said: "We're seeing more flexibility from the Centers for Medicare & Medicaid Services, especially toward Medicare Advantage plans to start reimbursing for seniors. That's number 1. Number 2, the whole movement toward pay for performance … and to shorten hospitalizations or reduce them … all of those factors are sort of creating opportunities for technologies like telemedicine to be better utilized."

Ziegler's Link.Age Fund has invested in multiple telehealth platforms that deliver after-hours coverage to post-acute facilities or concierge-like services for senior living. Sophisticated solutions may earn providers more partners using alternative payment models, an important return on investment in competitive markets.

McCracken expects reliance on telehealth monitoring to increase with the prevalence of behavioral health needs among baby boomers.

Of the largest 150 single-campus senior communities, 99% now have electronic point-of-care systems, with nearly 94% adopting EHRs. Among LZ 200

communities, those percentages fall to 79.5 and 75.5, respectively. Alwan said that may reflect the acquisition of less tech-savvy facilities.

But in each of the 17 technology categories tracked by the Ziegler CFO Hotline survey, multi-site organizations were more likely to have plans to invest over the next 12 months than single sites. Categories leading the way for planned spending include infrastructure (37%), workforce management (33%), internet or social media access (33%) and telehealth (33%).

Importance of tech staff

Another trend is the hiring of high-level technology staff.

Nine of the LZ 200 companies added a chief information office or technology officer last year.

"Technology is moving so rapidly [that] you need to have a strategic mindset beyond somebody maintaining your systems," said McCracken, adding that technology demands have contributed to consolidation in the skilled nursing segment. "Technology is one of the areas where scale of an organization can be a significant differentiator."

Easing resident life

One area Zielger is not yet measuring — but may soon — is spending on voice-first and other internet of things capabilities, such as "smart-home" devices.

> **"Technology is moving so rapidly [that] you need to have a strategic mindset beyond somebody maintaining your systems."**
>
> Lisa McCracken, Ziegler

They have a relatively low cost of entry, match services available in residential and hospitality settings, and typically are easy to use for seniors who may struggle with more traditional interfaces.

"We're seeing a lot of products enter this space, including HIPAA-compliant skills for those devices, to encourage adoptions in skilled nursing facilities and hospitals," Alwan said. Amazon's Alexa, for instance, came out with a HIPAA-compliant suite of medical skills in April. (See the related article on page 3.)

Another area driven by resident choice relates to resident engagement platforms. Although they don't necessarily net a tangible return on investment, Alwan said the ability to communicate with fellow residents and engage in shared interests boosts quality of life, which can lead to marketing leverage. And staff management tools that help with recruitment, scheduling and retention also are gaining a foothold, to which McCracken credits an extraordinarily tight labor market.

Satisfying and treating residents; capturing and using data; and transforming the landscape with easy-to-use tools takes an incredible amount of bandwidth and security.

The Hotline survey found that investment in information and communications technology infrastructures, such as high-speed internet connectivity and wireless capabilities, was the most common 2018 tech spending priority, and it is the top priority for 2019 planning as well. ∎

Top 12 phishing email subject lines

By Robert Abel

Barracuda Networks researchers have compiled a list of the top 12 most common subject lines used in phishing emails targeting businesses.

Email subject lines are an important area of focus because they frequently are used by cybercriminals to try to create a sense of urgency to compel unsuspecting users into opening emails and potentially downloading malicious attachments.

Researchers analyzed more than 360,000 phishing emails over three months and found that the most common subject line used in attacks is "Request," accounting for more than one-third of all of the phishing messages analyzed.

The complete list of top 12 subject lines, according to the Barracuda Networks' Spear Phishing: Top Threats and Trends report:

1. Request
2. Follow up
3. Urgent/Important
4. Are you available?/Are you at your desk?
5. Payment Status
6. Hello
7. Purchase
8. Invoice Due
9. Re:
10. Direct Deposit
11. Expenses
12. Payroll

Hackers often send emails to generic corporate addresses to reach as many people as possible with one message.

Department, job level among top factors in targeted email attacks

By Doug Olenick

Experts now are able to determine whether a particular employee is likely to be targeted with a fraudulent email.

By drilling down through a series of facts related to a person's digital footprint, a study by Panorays found, a list can be generated of people most likely to be singled out in an attack. The company automates third-party security management.

Factors such as whether a person's login credentials for other websites have been compromised due to an earlier data breach and were available for sale on the dark web, and even how old a worker is, play a large role in determining whether a worker represents a potential issue, Panorays said.

Production and operations are the most targeted departments in phishing attempts.

Older employees may fall into that category not because they may be less cybersecurity-savvy but simply due to the fact they have spent more time online and thus have a greater chance to have had their credentials stolen, the company said.

A separate study by cybersecurity company Proofpoint found that individual contributors and low-level management workers were targeted 72% of the time in phishing attacks. Production and operations were the most targeted departments, absorbing 22% of all attacks, with sales being hit 14% of the time and management 13%.

Hackers also are interested in getting the most "bang for their buck." Thirty percent of phishing attacks, Proofpoint found, targeted generic corporate addresses, such as sales@company.com or inquiries@company.com, which normally reach multiple people in a single company, helping increase the reach of the attack through a single email address. ∎

Versions of these articles originally appeared in SC Magazine, a sister publication to the McKnight's brands.

Operators double down on digital

Assessment of infrastructure needs important before any project begins

By Kimberly Marselas

When Maplewood Senior Living opens the doors on its new, urban luxury brand early next year, all 215 units will feature embedded technology that provide intuitive solutions.

Residents at Inspir Carnegie Hill in New York City will have touchless control of their heat and lights, be able to call for maintenance or medical help by voice and even take virtual reality trips alongside neighbors.

The abilities are enveloped in a technology suite named Alli, which has an innovative and comprehensive design that is as much at the building's core as its upscale finishes and Upper East Side views.

"Technology is one of the critical components of the Inspir experience," said Brian Geyser, APRN-BC, MSN, chief clinical officer. "For residents in particular, we're attempting to build in technology that is passive, not in-your-face. It's enhancing their lives, their safety and their engagement."

The process of innovation started pre-construction, when Maplewood began testing some internet of things concepts at its other locations. After settling on the right toolkit for Inspir, clinical innovators worked with the architectural and design professionals to understand construction and infrastructure needs.

Though huge server space isn't required with so many

An artist's rendering of Inspir Carnegie Hill.

Illustration: Maplewood Senior Living

cloud-based approaches, the community will require robust and reliable Wi-Fi coverage, both for residents and staff. The initial system was built out to accommodate 250 residents, anticipating that all of them will be heavy technology users.

As the use of technology increases across senior living and care settings, planning will become all the more important.

Majd Alwan, Ph.D., senior vice president for technology at LeadingAge, said research has found that high-end technology

users (a group to which many baby boomers belong) increase their bandwidth need by 50% annually.

They'll bring their own devices when they move into senior living environments such as Inspir, which also are doubling down on digital.

Common built-in features might include digital memory boxes for residents living with dementia, acoustic loops that help hearing aids function, motion-detector night lights to reduce fall risk, telemedicine cameras and wellness programs.

"Technology is no longer an option and is standard in all senior living projects," said Dean Maddelena, president of Austin, TX-based senior living designer studioSIX5. "What is optional is the degree in which our clients want to invest in long-term solutions. We always recommend scaleable, robust infrastructures to accommodate the next wave of breakthroughs on the horizon at all levels of environments, active adult to skilled nursing."

At Inspir, each room will be equipped with an Amazon Echo Show, with a screen large enough to display menus and activity lists. The company is installing new nurse call and access control systems, as well as a real-time location tracker — technologies that could end up at other Maplewood properties, including the Southport, CT, location now under construction.

Construction and operational budgets must account for the costs of infrastructure and installation and device maintenance. Costs to run fiber to each room also come into play, as do cybersecurity protection and IT staffing needs.

Those considerations aren't just for luxury properties anymore.

If residents are used to technology features such as voice-command lighting and touchless faucets in their local hospitality or dining scene, then they likely will expect that level of digitization in an independent living or assisted living community or nursing home.

But Maddelena said consultants sometimes fail to offer

At Inspir Carnegie Hill, every room will be equipped with an Amazon Echo Show, with a screen large enough to display menus and activity lists.

Photo: Amazon

long-term care clients up-and-coming technologies that might be useful in the near future.

"The key is to build in the infrastructure, so as different technologies and products become affordable, the infrastructure is in place to accommodate them," Maddelena said. "Once it is a proven best practice and it is implemented more, the price will come down, and everyone benefits."

Geyser said it's difficult to imagine all the capabilities that have yet to be discovered, particularly on voice-controlled platforms.

"This is a tremendous opportunity to leverage voice for this population," he said. "We want to start small and see how it goes. The promise is when [Alexa] gets smarter and understands nuance and commands specific to seniors."

Recently announced HIPAA-compliant capabilities, no doubt, are not the end of Alexa's advancements in this area. ∎

Getting employees to key in on cybersecurity

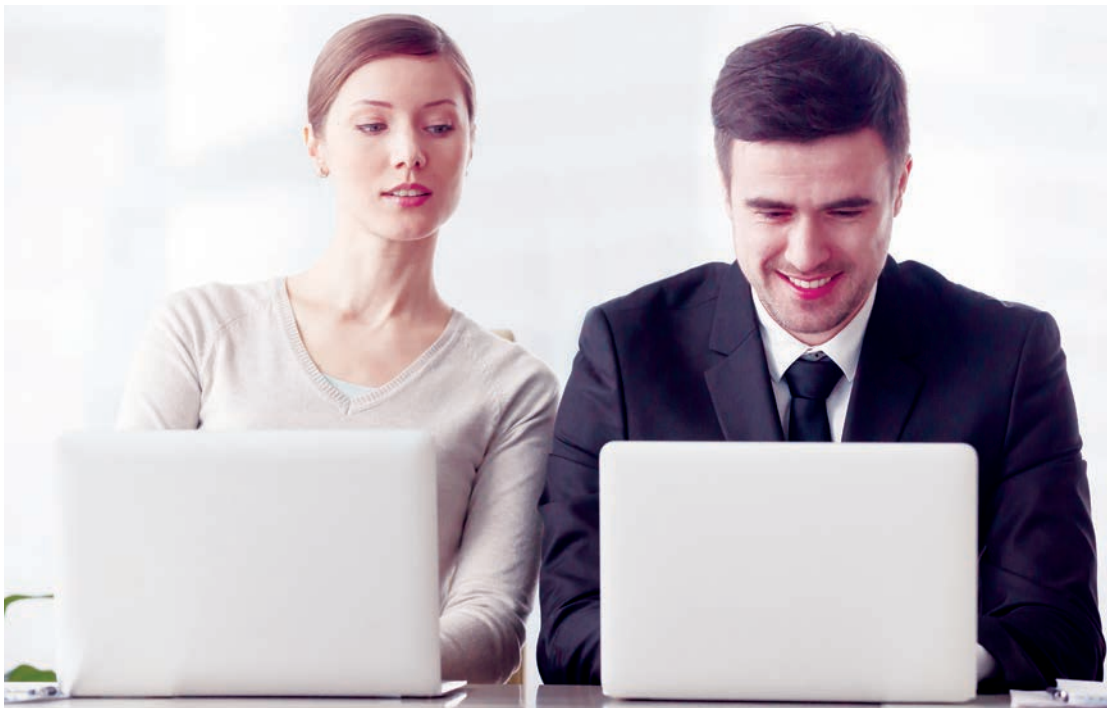## Culture can address your biggest vulnerability — workers — experts say

Photo: fizkes/iStock/Getty Images Plus

By Karen Epper Hoffman

The weakest link in cybersecurity, it's often said, is the occupant of the space between the chair and keyboard. Indeed, with phishing attacks not only still seeing widespread success but actually an uptick, employees arguably are a bigger security weakness than any type of technologic vulnerability.

On the other hand, a company's employees can be the most important resource for combating interlopers and developing a strong IT security culture. Information security increasingly is being seen as a people problem — with a human solution — rather than a technologic one.

"I meet every new [employee], and I always tell them, you are the first and last line of cyberdefense," said Graeme Hackland, chief information officer at British Formula One team Williams Racing.

"Colleagues can deliberately or inadvertently put the organization's data and IT systems at risk or have their accounts compromised," he adds.

The Crowd Research Partners 2018 Insider Threat report surveyed 472 cybersecurity professionals, 53% of whom said that an insider attack had definitely happened at their organizations in the past year. And nine out of 10 respondents said they believe that their organization is vulnerable to insider attacks.

Similarly, Ponemon Institute's 2017 Cost of Data Breach Study found that 47% of all enterprise breaches are caused by employees, either operating for their own gain or to damage the organization, or unknowingly being compromised.

"The threat comes from employees having access to valuable or sensitive data, combined with the often unavoidable fallibility of human error," said Claire Wiggill, vice president for strategy and business development at BPM platform provider PMG.

More than one-fourth of respondents to a recent survey admitted that they often leave their work computer unlocked when they're not present.

Companies falling short

"Access to IT systems is essential for so many of us to be able to do our jobs," said Wiggill, who stressed that managing access is key to guarding against insider threats. But that's where many organizations fall short.

According to a recent research study by PMG, 44% of millennials, 30% of GenXers and 16% of baby boomers reported that they still had access to applications from at least one previous job. The ability to access a former employer's data and networks — even ones to which the employee should not have had access in the first place — remains a common problem.

"An organization should have a record of who has access to what data that can be reported on and reviewed at any time," Wiggill cautioned.

To accomplish this task, Wiggill recommended that organizations institute an internal audit practice to create better and more consistent governance.

"People are a great asset when given a clear pathway to identify and report possible security issues," she said.

KnowBe4 founder and CEO Stu Sjouwerman pointed out that the reason cybercriminals will target human weaknesses is that doing so typically is easier than tracking flaws in a network.

"These bad guys are business people; their time is money," he said. "If they want to find vulnerabilities in software, it may take weeks, but finding a vulnerability in a person can take minutes. It's the path of least resistance."

Human solutions required

Until recent years, the perspective in enterprise IT security largely has been that breaches primarily are a technologic concern that should be solved with "filters and updates and shiny new security software," according to Sjouwerman. "But it is a combination of technology and people. IT security teams need to consider security culture, get those employees in their own corner and make them the last line of defense."

Attitudes are changing, though, as a rapidly increasing number of large and small-to-mid-sized organizations are managing more consistent security policies and training employees to understand what to do day-to-day, and what to look for.

Most human errors are innocent. An employee absentmindedly opens a legitimate-looking attachment, or an eager-to-please human resources employee releases confidential personal information while responding to an email that appears to be from a top executive.

"People often don't realize the risk their actions have on a company's security posture," said David Pignolet, CEO of SecZetta. "A wrong click on an email, or accessing company files on personal devices, can easily lead to a breach; after all, it is usually the weakest points hackers target."

As organizations seek to create more dynamic and efficient environments, embracing remote access through an assortment of mobile devices and cloud support, even the very concept of having a "perimeter" for the network becomes fuzzy. Whereas in the past, an organization's barriers were very well defined, Sumir Karayi, CEO of 1E, said that "today's level of access and flexibility brings with it an opportunity for the employee to contribute much more than they have in the past, but it also brings with it dangers … Today, businesses are incredibly porous."

Tim Woods, vice president for technology alliances at FireMon, said "many employees simply don't understand that their credentials are the No. 1 target of hackers, and how clicking on a bad link or downloading an infected attachment can be the opening shot in compromising the entire corporate network and its data."

Hence, almost all of the high-profile cloud data breaches that have made headlines over the past few years were the result of human error, according to Woods and other security experts.

But often, it's even more basic — an employee finds an unused USB stick on the floor (left behind by a hacker) and inserts it, or creates passwords that are too easy to crack. In early 2018, a Department of Homeland Security employee caused a huge security stir by leaving behind sensitive Super Bowl security documents on an airplane.

Many people do not even consider their behavior insecure or risky. They see them as shortcuts or a means to encourage or allow for teamwork. More than
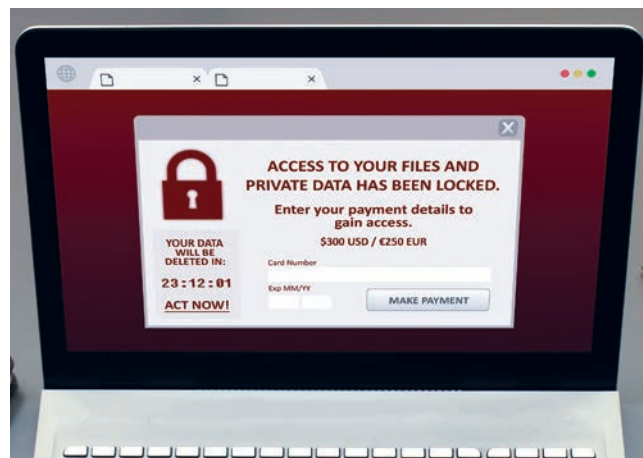
Clicking on a bad link or downloading an infected email attachment can compromise an organization's entire computer network.

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one-fourth of respondents to a 2018 security survey sponsored by Shred-It, for instance, admitted that they often leave their work computer unlocked when they're not present.

With employees feel overworked, "they're more likely to take the quicker path, forget to change a password or cut corners, or leave confidential files out open on a desk," said John Petrie, CEO of NTT Security.

Sjouwerman pointed out, "It's more of a question nowadays of which recent data breaches were not caused by some human error, than which ones have been."

One might assume the up-and-coming generation of employees entering the workforce — those who have grown up with the internet and mobile phones and have always been aware of the lurking cyber-crime specter — would just naturally come to work with better security hygiene.

According to the 2018 SailPoint Market Pulse Study, however, that's not the case. A full 87% of people aged 18 to 25 admitted to reusing the same passwords, with almost half of them doing so across personal and work accounts. Almost one-third of those respondents [31%] also said that they have installed software on their business devices or networks without prior authorization from their IT department. This so-called practice of "shadow IT" has risen sharply since SailPoint's 2014 study, when only one in five employees said they were installing software without permission.

Training crucial

Because even the most well-intentioned employees are fallible, organizations still need to do their part to beat back the

Almost one-third of respondents to a recent survey said they have installed software on their work devices or networks without prior authorization.

rising tide of attempted compromise. Security awareness training is a critical, foundational and still-too-often underutilized tool that enterprises can and should enlist, Petrie said.

"And I'm not talking about the once-a-year PowerPoint presentation," he said. "Humans are human, and they will make mistakes. Training programs must evolve."

Especially as media-driven millennials increasingly flood into the working world, Petrie and other security experts are pointing out the need for more bite-size, accessible training — online as well as in person — that covers a broad expanse of possible issues and tries to connect with employees in a way that is meaningful to them.

"If there's a hack, we quickly create new security teaching material that relates to that," Petrie adds. And NTT Security also is standardizing its employee onboarding process to help reduce the risk of giving any employee — even executives — too many privileges or

failing to change their access when their status changes.

"From a global perspective, it's … important to make sure that onboarding and security controls are consistent across the entire company," Petrie said.

"We have to come together and create a baseline that all our companies will follow. Standardization and identification is part of everything we do," he said. "It comes back to communication and training. The technology is not the main issue here. The failure of technology is not the cause of the hack."

Create a culture of security

In the end, industry experts say it all boils down to creating a culture of security throughout the organization, from the top down, and integrating myriad security training techniques and methods to make sure the message reaches all employees.

"Security training should be part of the entire hiring process from recruiting to employee engagement," Pignolet said. "Companies have gamified

just about all aspects of the enterprise to educate and excite employees. The same should hold true for cybersecurity. Companies should find ways to make it fun and engaging and not just enforce policies that seem to slow down the business rather than protect it."

Hackland said his company uses "every published breach example as an opportunity for education." He recommends meeting "every new starter in your organization," noting that "they're obvious targets, especially in the first weeks of their employment after they update their LinkedIn profiles."

Williams now "runs 'lunch-and-learn' sessions on a wide range of topics," he said. "People who are risk-aware in their personal lives will be better prepared for risks in their working lives," he adds. ■

A version of this article originally appeared in SC Magazine, a sister publication to the McKnight's brands.

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6 ways tech can curb hospital readmissions

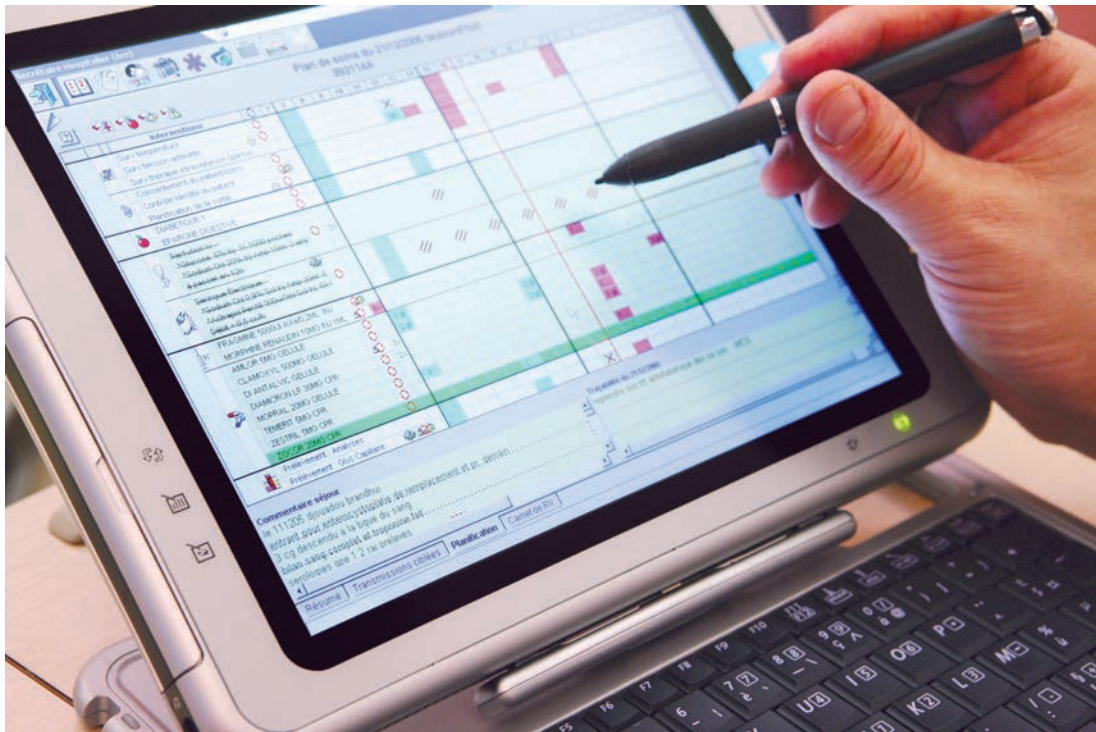## Opportunities are profound and there for the taking

Photo: BSIP/UIG/ Universal Images Group/Getty Images Plus

By Dianne Sullivan-Slazyk

Hospital readmissions are a chronic challenge in senior living and care. One in five Medicare beneficiaries ends up back in the hospital within a month of discharge, at an annual cost of $17 billion.

Advanced technologies can help turn the tide for senior care providers in reducing readmissions, creating efficiencies throughout the care cycle, and delivering better care — anytime, anywhere. Here's a look at existing technology making a difference today and holding promise for the future.

1. Electronic health records

The technology engine for revolutionizing senior care is the electronic health record — a single computerized version of an individual's health data and personal information. Equipped with tablets or laptops, care teams today can access the EHR at the point of care to make the best medical decisions, avert medication mistakes and prevent hospital readmissions. EHRs also have the potential to become hubs for coordinating interactions among hospitals, post-acute care providers, payers and other key players in healthcare delivery.

2. Remote monitoring technology

Remote patient monitoring technologies keep a close watch on resident conditions and can derail impending health episodes and emergency hospitalizations. Leading RPM programs offer "instant-on" tablets and integrated Bluetooth wireless devices that help in navigating complex illnesses. Individuals connect with virtual

care teams for one-touch videoconferencing, biometric data sharing and ongoing education, coaching and reminders.

Another innovation is contact-free continuous monitoring. These programs transmit real-time data on heart and breathing rates, along with movement levels, through a sensor placed under the resident's mattress. Care teams proactively can identify health changes and adjust treatment plans as needed.

3. Predictive data analytics

Senior living and post-acute providers progressively are using predictive analytics for decision support in determining the best course of action for each senior in their care. With these data, they can identify rising-risk and at-risk residents, triage those who need early intervention and reduce preventable hospitalizations. Data from populations of older adults, such as those with diabetes or congestive heart failure, can be aggregated to determine collective patterns and develop best care practices.

4. Smart wearables

A leading cause of hospital admissions, readmissions, and injury-related death is falls — experienced by half of seniors aged 80 or more years. Wearables, with sensors that detect falls and alert care teams, are an essential tool in fall prevention. Other senior safety systems include smart algorithms that establish a senior's routine

Wearables, with sensors that detect falls and alert care teams, are an essential tool in fall prevention programs.

Photo: DragonImages/iStock/Getty Images Plus

> ## "Thanks to technology's explosive growth over the past two decades, senior care continues to improve dramatically."

activities, pinpoint any changes and provide emergency alarms to caregivers.

5. Medication reminders

Older adults forgetting to take their medication, or taking their medication incorrectly, is a prime culprit in return trips to the hospital. Today's pill dispensers increasingly are equipped with timers and alerts and can communicate with computers and smartphones, helping residents and caregivers avoid incorrect medication use. Also, an array of senior

health apps provide medication reminders and prevent dosing errors.

6. Internet connectivity

The more seniors understand their health challenges, the more empowered they are to take charge of their health and stay away from the hospital. The internet is central to ongoing education, providing a forum for researching conditions, communicating with healthcare providers and accessing patient networks. According to the Pew Research Center, 67% of adults

aged 65 or more years are online today, 40% own a smartphone and 32% have a tablet.

Internet use also can reduce senior loneliness, a condition experienced by 40% of older Americans and inextricably linked to declining health. Through email, social media and video chat services, seniors are warding off isolation and staying connected to those who care.

Into the future

Thanks to technology's explosive growth over the past two decades, senior care continues to improve dramatically. For providers that can offer these life- and health-supporting technologies across their enterprises, the opportunities are profound and there for the taking: Improved health outcomes and increased engagement as seniors and loved ones become partners in care, all with the end goal of curbing the cost-and-health effect of readmissions. ■
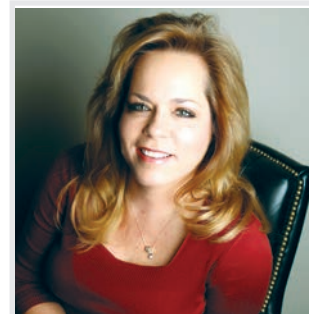
Dianne Sullivan-Slazyk, RN, BSN, MBA, is chief clinical officer at StoneGate Senior Living.

EHRs help providers assume, manage risk

Tech is the ticket for skilled nursing and assisted living in this new era of partnerships and data-sharing

By John Hall

Adoption of electronic health records systems in nursing homes is reaching saturation. Assisted living is another story.

This puzzles executives such as Lee Kilmer, vice president, product management, for MatrixCare, considering how its demographics are shifting noticeably — and quickly — toward a population whose overall health is far more chronically acute than ever imagined.

No longer are EHRs an option in assisted living communities, Kilmer believes, yet system adoption is agonizingly slow. Those who delay implementation expose themselves to innumerable risks, most acutely outcomes and quality of care.

It wasn't that long ago when early adopters of EHRs were organizing their electronic filing cabinets and agonizing over data entry and storage.

"In a remarkably compressed period of time, most nursing homes today are using all of that information now to drive insights and analytics about the residents and their health and wellness while potentially detecting changes in condition before they become really serious, using the data to provide better care and drive better outcomes," Kilmer says.

Today, in fact, EHR systems

Photo: Terry Vine/DigitalVision/Getty Images Plus

are evolving beyond their role as the system of record for everything clinical to powering systems of engagement and systems of insight, says Kilmer, whose recent presentation on "predictive caregiving" at the Argentum Senior Living Executive Conference showed how his company is leveraging machine learning tool sets to help maximize the resident experience and quality-of-care outcomes.

"This is where analytics and advanced and prescriptive analytics come into play to help providers better understand what's going on in their organizations, and where the improvement opportunities are," Kilmer adds.

In a recent interview with *McKnight's Long-Term Care News,* MatrixCare President

and CEO John Damgaard laid out the "unprecedented" challenges ahead for providers.

The air is thick with urgency, a situation Damgaard described as "a very clear fork in the road" where providers "can either assume and manage risk in care delivery or become a commoditized supplier to those who do assume and manage risk in care delivery." Nothing illustrates the sense or urgency more than October 1 deadline for skilled nursing providers to transition from the resource utilization group scheme to the new Patient-Driven Payment Model.

Kilmer believes that successful PDPM compliance depends heavily on a fully implemented EHR system. EHRs also are the ticket senior living providers need to enter this new era of partnerships and data-sharing.

"We are seeing more and more of our customers operating within a network," he says. "Some may be a diversified network themselves and have skilled nursing and assisted living and home health all under

> It will be crucial for operators to have the ability to share information with others.

their brand. They also may be partnering with one or more hospitals in their region."

It will be critical for operators to have the ability to integrate with partners or integrate data across the network to transition care, help families stay connected and generate insight and analytics, among other capabilities, Kilmer says.

"No longer can any provider not think of themselves as part of something bigger and greater, especially in this new environment of value-based care," he adds. ∎

Three Tips

1 Prioritize the deployment of an electronic health record platform if you haven't done so already.

2 Recognize and understand the fork in the road for you as a provider in a world of value-based care. Decide which side of narrowing networks you want to be on. Develop a broad view of your requirements for resident care, and look to implement solutions that help you gain an advantage in a world of value-based care, ongoing labor shortages and increased competition.

3 Proactively work with your acute-care partners to reduce complexity and manual processes, especially around care transitions. Find areas where both organizations benefit from improved health information exchange.

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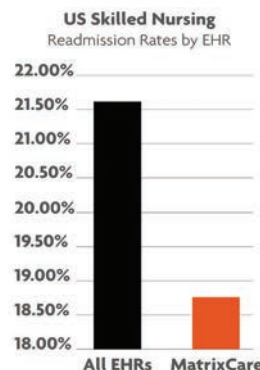- Supports enterprise-wide analytics
- Enables successful care transitions

MatrixCare exchanges information with other systems 4 million times a day, helping care teams "move as one" to provide better outcomes.

MatrixCare-powered providers experience fewer readmissions than those using other EHRs.

US Skilled Nursing
Readmission Rates by EHR

22.00%	
21.50%	
21.00%	
20.50%	
20.00%	
19.50%	
19.00%	
18.50%	
18.00%	
	All EHRs MatrixCare

Source: CMS July 2018; CMS Nursing Home Compare 2015Q3-2016Q2, Potentially Preventable 30-Day Post-Discharge Readmission Measure, MatrixCare Elite Package.

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'Old school' TV meets internet of things

Turning the television into an entertainment hub enables all residents to enjoy the benefits of technology

By John Hall

Skilled nursing facilities and senior living communities are investing heavily in high-speed internet and Wi-Fi to make options such as video streaming and photo-sharing accessible to residents and staff alike. And like any business in America today, senior care providers no longer need to be convinced about the value of connected technology — from smartphones, tablets and wearables to other kinds of connected devices.

A disconnect may exist between the desires and capabilities of residents and their younger family members, however.

"We're finding a lot of Gen-Xers and millennials want to interact with their grandparents through the technology they use, but they have to be aware that not everyone who is 75 and older wants to engage with new forms of communication," DISH Business Vice President Alistair Chatwin says. DISH is a satellite-based entertainment provider serving the senior living market.

The solution: Television becomes the entertainment hub.

"A big challenge in the resident user experience with all this technology is that the interface is new and sometimes con-
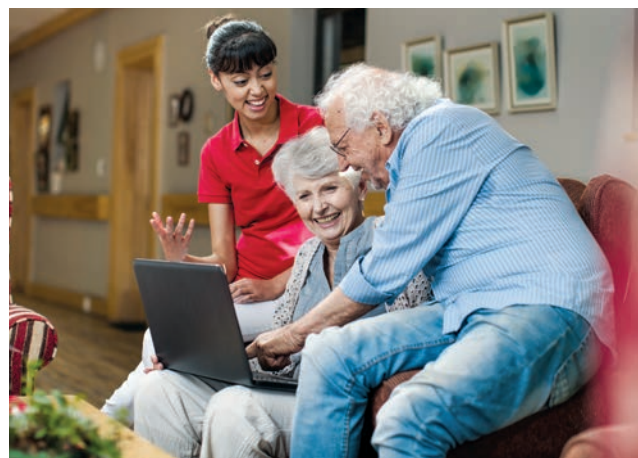

Photo: Westend61/Getty Images Plus

fusing," DISH Business General Manager of Business Development Nate Block says.

"We believe there is comfort and familiarity among seniors with television," he adds. "TV is a primary source of entertainment for many seniors, and our focus is finding ways to blend the highly beneficial, but increasingly complex, advanced service into that which they are most familiar."

Block says DISH plans to find ways to continually integrate current and emerging tech into the long-term care entertainment experience.

"Our goal is to provide technology that makes new services accessible," Chatwin adds. "That could be anything from tech that allows access to famil-

iar applications, such as Netflix from the set-top box, or initiating and accepting video calls from their children just using their TV remote."

Future plans include incorporating Google artificial intelligence and voice recognition, including voice control and search of live TV.

Managerial considerations

One big takeaway for managers of long-term care communities is the need to apply the same thinking to their entertainment services as they do other data services, whether it's a satellite dish or fiber-optic cable.

"When we talk to some of these administrators, they typically think about the infrastructure needed for TV services separately from the network needed to support internet and Wi-Fi. We believe they should be thinking about the convergence of the two," Block says. "Instead of having an IT department thinking about how to get internet service to the nursing stations, they also should think about leveraging their wired

Not all long-term care residents will want to use newer forms of communication.

and wireless infrastructure to do more for their residents. That convergence of services is the growth that's going to power this 21st-century entertainment experience."

Striking the best balance

Coordinating the provision of entertainment and communications requires leaders to stay on top of the technology trends and the community.

"Managers should be considering the entertainment and technology needs of residents not just today, but those three-to-five years out," Block says.

In the end, it's important to be mindful of the changing needs of residents. ■

Three Tips

1 Be aware of emerging technology, but remain mindful of your residents' abilities and desires to adopt it.

2 Consider your facility's IT network and entertainment / communications networks jointly, because both ultimately are affected by the convergence of current and emerging internet-based applications and solutions.

3 Never discount the power and influence of your residents' offspring in the choices they make and desires they convey regarding life at your facility.

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Property maintenance goes high-tech

Implementing a software-powered solution can be equivalent to adding an assistant to the staff

By John Hall

Just 10 years ago, it may have been enough for your maintenance supervisor to keep up with boiler and air conditioning tune-ups and routine things such as replacing lightbulbs, configuring wiring for a new breakroom TV or ensuring that the sprinkler systems were properly functioning.

But just as the arcane "janitor" title has been replaced with "maintenance technician," property supervisors now have significantly elevated roles in today's high-tech facilities.

More than ever, they could use a few extra hands. To answer the call, facility management in the 21st century has gone high-tech, with technologies such as virtual reality-enabled three-dimensional mapping of facilities and their physical plants, wireless radio frequency temperature and water sensors, and emerging apps that can literally see behind walls.

Along with the combined wisdom of a plumber, an electrician and a contractor, today's maintenance technician needs to know about micro-computers.

"In many respects, proper care of your physical plant is just as vital to your success as providing the best possible resident care," says Dan Roberge, president of Maintenance

Care, whose arsenal includes an industry-leading maintenance software solution and all of the aforementioned new gadgets. That's why, as Roberge argues, today's senior living maintenance staff members need to be able to marshal current technology to maintain the health of your physical plant, whether it's via a large-scale retrofit or a long-term plan to squeeze as much useful life as possible out of an aging facility.

The biggest risk of all to this industry veteran is an overwhelmed maintenance supervisor drowning in paper as work orders pile up..

"There's no record-keeping,

Photo: John Merkle @ Elmhurst Park Place

little accountability and loss of control," Roberge says. "What's worse, I've seen many an administrator remain a little in the dark as workflow suffers, many times because they either don't know how or are afraid to address the individual altogether."

The mistakes facility managers make or fail to address can be devastating. Even those who use an off-the-shelf spreadsheet program to manage maintenance tasks quickly could find themselves in trouble. Part of the problem is getting what data you do have exported to a format that's not only needed but also allows you to make the right decisions, he explains.

Armed with the right solution, for example, a supervisor easily could argue a large expenditure once every five years to retrofit a nursing home or senior living community with LED lights when he or she is able to show the calculus involved with manually replacing older bulbs several times a year. Not

Property supervisors have significantly elevated roles in today's high-tech facilities.

to mention related decisions around service contracts and maintenance agreements.

Another example, particularly relevant for anyone managing a large facility that is aging: A surge in repair problems. If such a solution identifies that most of the problems are occurring in the east wing of the building, for instance, then the supervisor can suggest a detailed plan to relocate tools, parts inventory and the maintenance office closer to the east wing.

"It's all about maximizing people, time and workflows based on trends," Roberge says.

Given the tumult in today's long-term care workforce, having a software-powered solution easily can add the equivalent of a full-time assistant that never tires and works 24/365 for no pay or benefits.

"When it comes to compliance and life safety, the advantages are vastly improved workflow," Roberge adds. ∎

Three Tips

1 Maximize people, time and workflows based on trends, not putting out fires.

2 Choose an industry-specific software solution with a robust, secure, verifiable and ever-evolving database.

3 Approach facility maintenance with a proactive and informed mindset.
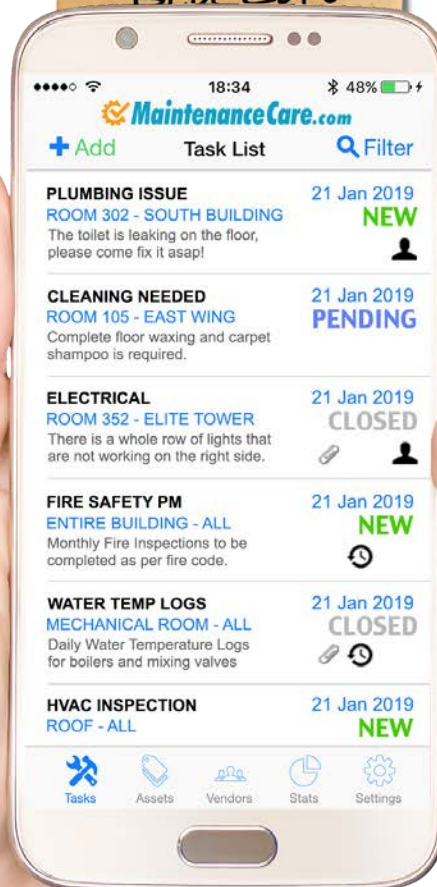
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Inspect
Bed Lift

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take temp reading
shut down pump
restart
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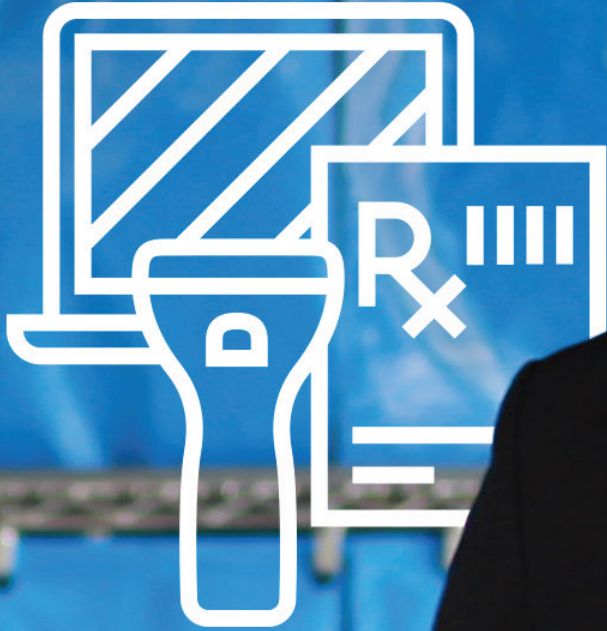air unit

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