

SPECIAL ISSUE

brief



Tech Advances in the Senior Space: Adoption, Implementation and Risk Management

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INTRODUCTION

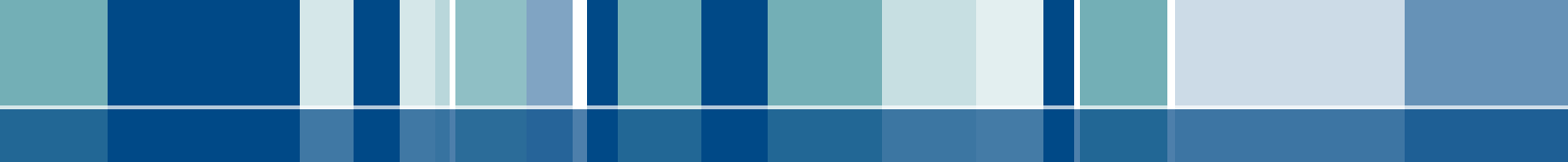
It's exciting and daunting when one considers how emerging technologies are transforming the senior care space. Exciting on the one hand because innovative technologies present opportunities for growth and operational improvement. Daunting because the dizzying pace of change can be disruptive, challenging, and potentially increases risk of exposure.

Both senior care residents and providers alike are more for embracing the cutting edge technological evolution than not. For residents, advances in technology translate into more care, safety, security, connectivity, engagement, enriched environments, and intellectual, physical, and creative well-being. For providers, new and emerging technologies offer the ability to improve clinical and administrative functions, promote business efficiencies, gain a competitive advantage, advance a brand, and be dynamic in the industry.

ADOPTION CONSIDERATIONS

Integration

Technology use in the senior living market historically has been focused on business office¹, sales functions², and clinical assessments.³ For the past two decades the use of software for accounting and financial support has become routine. Sales software has also become more commonly used, as has software for clinical assessments. These programs have focused on bringing greater accuracy and efficiency to specific job duties. These software programs have resulted in better reporting tools and better ways of managing the business of senior living.



Over the past decade efforts have been made to integrate different pieces of software to reduce the work load, (and thus reduce the potential for mistakes), that has been problematic with stand-alone software products. As this integration has occurred, and as reporting has increased, there has been a push to use software to impact the efficiencies of the business.

With increasing frequency, senior living communities have also relied on technology to assist with building access and security concerns.⁴

Clinical Applications

Because the clinical part of the business is so critical to the overall success of the business, both from a regulatory standpoint, as well as customer satisfaction, there has been a growing focus on clinical technology. An example of this is the use of clinical assessment tools to help staff provide care to residents at the time that care is needed. In addition, more and more assisted living and memory care facilities have started to use electronic medication administration software. The use of this technology can greatly reduce medication errors and thus reduce licensing deficiencies and potential negative resident outcomes.

Finally, there is growing interest in technologies that address the growing issues surrounding cognitive impairment. The issue of keeping a resident “safe” is ever-present. Technologies that alarm entrances/ exits are becoming more common.⁵ Resident-worn electronic devices that send an alarm if the resident tries to exit the community, are being put into use more and more. Sensors placed in the apartment of a memory care resident that sends an alarm to a care staff person, if the resident gets up in the middle of the night, can help staff respond more proactively to a resident in need.

All of these technologies have focused on the business of senior living. These technologies have brought efficiencies to the business. They have helped in managing the business with the ability to analyze reports, and from these, to make business decisions. These technologies have helped to capture revenue opportunities and have also helped to some degree with reducing human errors. And we are now moving into the use of technology to react more proactively to some resident safety needs.

Resident Engagement Applications

The focus on technology for today, however, is changing. Within the senior living industry there is an acknowledgement that engaging the resident and the family with technology can make both a positive impact on the life of the resident and also bring a competitive advantage to a facility or company.⁶ The question now is what type of technology (or technologies) will work best for a specific company. As companies begin to focus more and more on resident engagement, a company needs to decide what engagement is going to look like, where within the continuum of services they want to focus, and what process will they use to measure engagement and satisfaction.

The issues surrounding some of these technologies need to be addressed prior to exploring any type of engagement technology. What does engagement look like? Who are you wanting to engage? The resident? The family? Both? Are there privacy issues that will need to be assessed? Are there regulatory issues that need to be considered? Will the technology “interfere” with care? Is there a “champion” identified that will help support a community with the piloting of new technology? How will this be introduced to families and residents? Will all residents be required to participate or will this be optional? How much staff time will be taken up with the pilot?

Business Considerations

Besides these more operational issues, there are also the business components that will need to be taken into consideration. Does a community have the bandwidth to support new technology to assure that it can be accessed throughout the premises? As a company, how will you measure ROI? Will this measurement be seen in terms of increased resident/family satisfaction? Or will this technology bring a competitive edge to a property such that there is an opportunity to increase occupancy or increase revenue? Does the technology have the potential to increase length of stay, and thereby increase occupancy? And finally, what if a pilot fails? Is there an appetite for taking the risk, and then being willing, if need be, to stop a pilot and begin to analyze what went wrong and what needs to happen to move forward?

There are also Information Technology interactions that will need to be considered. Will the piece of technology being considered stand alone, or will there be an ability to interface with the business IT systems? If the technology stands alone, can it deliver on its full potential? Is there duplicate information that needs to be entered that will be seen by staff as simply additional work with limited payoff for the staff member?

Every day there are more and more entrepreneurs, both start-ups with limited resources as well as larger companies that are moving into the senior market, trying to deliver on engagement products, or products using predictive analytics to help senior businesses make better decisions. There also are companies that are simply trying to make a simple product easier to use for seniors, (think Oxo kitchen products). As a company begins to explore options, it needs to keep in mind the scalability of the product, and/or potential product enhancements over time. Does the product address only one thing, and if so, is that one thing enough to make an investment worthwhile? Is the product unique enough to give that competitive edge? How can the product be marketed to provide that sales/marketing advantage?

Decisions will need to include determining the cost both for the product as well as the staff time in a roll out, the ability to recoup costs, either in terms of increased occupancy, or an increase in base rates as a result of being unique, or if there is an opportunity to pass at least some of the costs on to the resident. Finally, the decision to begin exploring new products needs to match the overall mission statement of the organization. The vision of the company will be a major determining factor in the choice of products to pilot, or to even pilot anything at all.

LIABILITY AND RISK MANAGEMENT ISSUES

Goals

When adopting a technology intervention to the operations at a senior living community, management should be aware of and seek to implement the following goals:

1. adapt tech solutions in a way that enhances resident service and safety
2. use technology to retain or enhance understanding of resident needs and condition
3. obtain resident cooperation and consent as necessary
4. comply with the community's contract and regulatory responsibilities

Historic uses of technology in senior living, such as data processing and communications systems, are designed to help staff do their jobs more efficiently and accurately. While they can create efficiencies in service delivery, they also can present risk if they fail or are not properly used. Newer types of technology being directed toward senior living tend to involve the residents more directly and add a new dimension to the legal and risk issues that must be considered. Examples include resident assessment and monitoring applications, resident-interactive reminder systems, and family or activity engagement programs.

Disclosure and Disclaimer

With technologies that more directly involve the resident, senior living operators must be sure that the resident understands and consents to use of the technology. For example, where a wireless emergency call pendant is made available to residents, it is important for residents to be told:

exactly what the device/program does: e.g., sends a signal to a central monitoring station, can be worn around the neck

how staff will use the technology: the station is monitored 24 hours per day; the person monitoring will attempt to contact the resident within the apartment by telephone, and if unable to reach the resident by telephone, will send a staff member to the apartment to enter with a pass key. If it appears that emergency services are needed, the staff member will call 911

the expected benefits of using the device/program: will help to summon emergency assistance when the resident cannot reach the telephone or the emergency pull cord

limitations of the device/program: e.g., responding staff will not render care; pendant may not be usable in all situations; cord can be a choking hazard

possible consequences of not using the device/program: may be unable to summon help leading to injury or death if incapacitated in the apartment

possible conditions of participation: e.g., approval by resident's physician

*whether there is an option to participate or decline to participate**

disclaimer: provider does not warrant the effectiveness of the device/program and makes no recommendation whether the resident should participate; resident releases provider from liability for decision to participate or opt out*

*The option to participate or decline may vary depending on whether the provider offers independent living or licensed care, and whether the device/program is considered necessary for clinical or safety reasons

Coordination with Outside Vendors

Certain kinds of technology may even obscure the operator's role and responsibilities to the resident. For example, if a tech application involves an off-site vendor whose product interacts with the resident, the respective roles and responsibilities of the senior living provider and the vendor may become unclear. Just as with an on-site private caregiver, the senior living provider, especially if licensed to provide care, must be sure that it has access to all the resident information known to the outside vendor that is necessary for the senior living provider to perform its contract obligations or regulatory duties.

In such a case, it may be necessary for the senior living provider and tech vendor to enter into a Service Coordination Agreement that addresses communication protocols, the reporting of changes in the resident's condition or needs, and monitors the effectiveness of the tech device or program. It is also likely to be necessary to specify that the regulatory obligations of the licensed senior care provider cannot be delegated to the tech vendor. Such an agreement may also allocate responsibility or liability among the parties in the event of an accident or injury related to use of the product.

Other suitable clauses may include assumption of risk, waiver of liability, indemnity agreements between operator, tech provider, and (especially for beta testing programs) the resident.

Of course, it is also necessary to assure that residents' confidential information is not compromised. Residents may not fully appreciate or agree with participation in and the consequences of using new technologies, and so it is important to disclose to them the benefits and possible detriments of participation in the program and obtain their written consent.

NEW TECH PRODUCT TESTING

When a senior living provider and tech company collaborate to test and develop a new application in a senior living community (a Pilot Project), several issues must be addressed, for example:

Goals

- a) Both parties agree to contribute their respective expertise and resources, with the intent to evaluate the effectiveness of the technology-enabled service for older adults residing in the community and to model the potential for a business relationship.
- b) Overall goals for the product are to: obtain feedback from caregivers about the effectiveness, resident interaction with device, and ease of use. The feedback will be used to improve the devices to develop final products.
- c) Overall goals for community are to: enhance the service experience for residents, and increase caregiving/operational efficiencies.

Resident Participation: by signing the consent form, residents agree to voluntarily take part in the pilot project and waive, release, and discharge the tech company and the community from any and all liability, including but not limited to, liability for injury, disability, death, property damage, that may arise as a result of participation in this pilot project.

Confidentiality: The Beta product may contain or represent confidential, proprietary information of significant value to the tech company, including trade secrets, know-how, ideas, intellectual property, inventions, plans, computer programs, etc., (Confidential Information). Resident and Community agree not to disclose any Confidential Information during the term of, and for a period of one year after the termination of, the pilot project.

Roles, Responsibilities

a) Tech company to provide:

- i) Assign a lead program manager to support the trial.
- ii) Provide ___ devices, together with such software, cell phone applications, or other programs necessary for monitoring the devices, at no cost to Community for pilot implementation and evaluation purposes.
- iii) Make reasonable modifications/accommodations to the platform/product to adapt it to Community and/or user requirements.
- iv) Implementation of jointly-defined workflow and protocols for targeted use cases (as defined).
- v) To the extent necessary or applicable, tech company grants to Community, its residents and caregivers, a nonexclusive license to use the devices and any applicable software or application necessary to run, operate or conduct the Pilot Collaboration, to interpret or store any information or data received, or otherwise necessary to achieve the purpose and intent of the Pilot Collaboration.
- vi) Trend reports of use/deployment relative to residents, caregiver staff and other designees as applicable/appropriate.

b) Community shall provide:

- i) Assign a lead program manager to support the trial.
- ii) Provide consultative guidance in the development of the trial design, workflow and practice guidelines.
- iii) Facilitate participation of residents and their families/support network, and provide sufficient executive leadership and staff to support and promote the pilot among residents and staff.
- iv) Instruct caregivers to complete a daily log to record resident behaviors/incidents, and whether the device/application worked properly. At the end of the pilot testing, Community will collect tech company daily logs and satisfaction survey forms and send them to tech company,

Privacy. In research records (the daily log and the satisfaction survey), residents will be identified by a personal code. The code will be kept in a locked file and shall remain confidential. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

Confidentiality For the purpose of the Pilot Collaboration, the parties intend to make certain confidential information available to each other. The parties will protect this confidential and proprietary information in accordance a Confidentiality Agreement.

Ownership of Technology and Intellectual Property Rights. All technology and intellectual property rights owned by a party prior to the Effective Date of the Pilot Project will remain the property of such party. All technology and intellectual property rights created or developed solely by one party during the term of the Pilot Project will be owned by such party.

PRIVACY AND SECURITY

With spectacular innovation comes a host of legal issues. Advances in technology have made personal information more accessible and easier to collect, access, repurpose, process, manipulate, store, and track. The array of legal issues presented when using technology is significant, but privacy and security issues are front and center.

HIPAA

Twenty two years ago, the Health Insurance Portability and Accountability Act ("HIPAA") was enacted, and since then the Department of Health and Human Services has promulgated several HIPAA regulations. HIPAA and its regulations are federal law that sets national standards designed to protect the privacy and security of residents' information. HIPAA applies to senior care providers that qualify as "covered entities." One of the three "covered entities" as defined by HIPAA is any health care provider that engages in the electronic transmission of protected health information in connection with one or more of the HIPAA defined standard transactions. A senior care provider that offers nursing or assisted living care for which reimbursement is received from a public or private payor, including a Medicaid waiver-type program, qualifies as a covered entity under HIPAA and thus subject to the federal law. When a covered senior care provider uses or permits the use of technology that accesses, maintains, stores, tracks, monitors, creates or uses residents' information it must invest time and resources to ensure that the tech complies with HIPAA.

Generally, HIPAA requires the senior care provider to:

- Conduct a risk analysis and implement a risk management process to reduce risks and vulnerabilities of exposure of residents' information;
- Develop HIPAA privacy policies and procedures to protect residents' information, whether paper based or electronically maintained;
- Develop HIPAA security policies and procedures to protect residents' electronic information, including identifying:
 - appropriate electronic, physical, technical, and administrative safeguards to ensure that residents' electronic information is secure;
 - security measures that protect the confidentiality, integrity, and availability of residents' electronic information;
 - a process for the tracking and removal of any hardware and electronic media containing residents' electronic information moving into, out of, and within the community;
 - a process for reusing and/or disposing of the technology that houses residents' information.
- Train staff and other individuals at the community on maintaining the confidentiality and security of residents' information and ensuring that only authorized staff and other individuals have access to residents' electronic information; and
- Develop, implement, and train on policies and procedures for the community to respond to, and recover from, security incidents and breaches;

Common Law Privacy

It may be that the senior care provider is not regulated by HIPAA. Nevertheless, the provider is still required by common law and generally by state licensing laws to protect the confidentiality of their residents' personal information. Further, most states have a data breach notification law that applies broadly to businesses that maintain sensitive and personal information, like social security numbers, credit card numbers, medical insurance information, and so forth. These laws require the business, which likely includes all senior care providers, to report breaches to the state attorney general. In addition, the Federal Trade Commission, which protects consumers from unfair or deceptive practices by businesses, is not shy about taking action against companies that have engaged in activities that put consumers' personal data at unreasonable risk. Accordingly, while there may be no specific guidelines, either in law or elsewhere, on how a senior care provider who is not subject to HIPAA should protect resident's information, drawing on HIPAA, the FTC, and any other federal and state laws governing patient/consumer information is a recommended approach.

Process

When a senior care provider wishes to work with a technology company to try out an innovative product or service, both parties need to invest time and resources to ensure that the product or service protects residents' privacy and security. Understanding the flow of resident information is critical to identifying the legal issues presented and determining what documentation is necessary to support the technological platform. The following are some considerations relative to each stakeholder:

Residents:

- Inform the residents of the technology and its purpose through meetings and marketing materials;
- Be transparent with the resident regarding how and in what way their information will be accessed, used, collected, shared, repurposed, processed, manipulated, stored, and/or tracked;
- Share with residents the consequences of using the technology, and the benefits and possible detriments of participating in the tech program;
- Obtain the resident's consent to participate in the tech program, along with any waiver and release;
- Obtain a HIPAA-compliant or similar form signed by the resident authorizing the disclosure of their information for purposes of participating in the tech program;
- Keep the resident informed of any developments and changes related to the use of the technology;
- Let the resident know if the program has discontinued or terminated; and
- If the resident has a legal or authorized representative (family member, for example), ensure that the above tasks are completed with that person.

Operator:

- Have a clear understanding of how the technology works and in what way residents' information will be accessed, used, collected, shared, repurposed, processed, manipulated, stored, and/or tracked;
- Develop and implement privacy and security policies and procedures and terms of use that are customized to the objectives of the technology and that protect the confidentiality and security of the information of residents who participate in the tech program;

- Require the technology company to provide immediate notice of any breach or attempted breach/security incident involving residents' information;
- Develop a breach and incident response policy;
- Ensure that the operator obtains a written consent and, separately, an authorization for disclosure of personal information from residents who participate in the tech program;
- Enter into a HIPAA business associate agreement with the technology company that addresses privacy, security and data breaches (for senior care providers subject to HIPAA) or a similar confidentiality/security/data breach agreement (for senior care providers who aren't subject to HIPAA);
- Enter into a limitation of liability agreement with the technology company holding the company accountable in the event of any breaches of residents' information;
- Limit access of the tech company's staff to only those individuals who need to access resident information or enter the community to operate the technology;
- Share only the minimum amount of resident information needed to accomplish the purpose of the technology;
- Train employees on their privacy and security obligations regarding maintaining the confidentiality of residents' information;
- Require the tech company to provide privacy and security training to its staff who will have access to residents' information;
- Periodically monitor the tech company's use and disclosure of residents' information to ensure that its confidentiality is maintained and remains secured; and
- Require the tech company to have a plan for how it will handle resident information if the tech program is terminated. The plan should include either destruction, ongoing secured maintenance, or returning to the provider of residents' information.

CONCLUSION

Advances in technology will have a long-term positive impact on both the providers of senior living services as well as on the residents who live in these communities. While there are a myriad of business and legal questions that will need to be addressed in any pilot program, this should not diminish an interest in moving forward with technology. Introducing new products and services must be decided upon only after weighing the cost-benefit opportunities both for the provider as well as the resident. There will be training needs with any new pilot, and there will be a few failures on the road to success. Finding a champion will be critical to the overall process. The entrepreneurial world in senior housing technology is growing rapidly. There is a heightened interest in finding products that enhance the lives of seniors and help providers manage their businesses with greater efficiency. Technological advances will provide solutions for both of these stakeholders: residents and operators.

END NOTES

- ¹ **Business Intelligence Systems:** collection, processing, benchmarking, integration, analysis, and presentation of business information to support business decision-making. **Financial Management Software:** tracks transactions, budget, planning, investments, spending, banking, bills, savings, investments, invoices, and taxes. All of the footnoted examples of technology applications are adapted from ASHA's *2017 Senior Living Technology Report*.
- ² **Customer Relationship Management:** analysis of data on customers and their interactions with a business for the purpose of improving the business's relationships with customers and facilitating growth in sales. **Internet Services:** Web-based services that fulfill a business's needs for tasks such as marketing, customer support, etc. Services might include lead generation, live chat, web design services, collaboration software, search engine optimization, email marketing, or marketing on social media
- ³ **Digital Point of Care:** mobile devices, such as tablets or smartphones, for documenting delivery of healthcare products to residents at time of care. **EHR [Electronic Health Record]:** a patient's medical history that is stored electronically. **EMAR [Electronic Medication Administration Record]:** automatically documents the administration of medication into an electronic record keeping system through inputs such as radio frequency identification, bar coding, administrator input, etc. **Family Communication/Crisis Management:** Systems utilized in the event of a crisis that increase accessibility of crisis plans, documents, templates, contacts lists, and other key materials, that increase communication and collaboration of personnel, and that control statements, points of contact, social media messages through approved responses. **Tele-Health:** System for delivering health care services and information through communication technologies such as internet for the diagnosis, consultation, treatment, and care management of a resident.
- ⁴ **Building Access and Security Control:** Comprehensive tools to monitor and secure facilities — systems that are designed to keep people and premises safe such as electronic locks at building entrances, biometric readers, scan or swipe card readers, integrated surveillance feeds, mobile phone credentials, RFID, etc.
- ⁵ **Resident Locating Technologies:** location tracking and identification of residents in near-real-time throughout a community. **Resident Monitoring (Comprehensive):** analysis and monitoring of multiple variables of a resident's activities and environment through means such as the aggregation of multiple sensor inputs. **Resident Monitoring (Focused):** monitoring an individual variable of a resident or their environment, such as bathroom usage or sleep schedule, **Wander Prevention:** assist in reducing the risk of wandering through means such as RFID tags, alert systems, secure doors, motion tracking, etc. **Emergency Response Systems/Resident Call Systems:** summon personnel in events of emergency or need. Systems can be neck pendants, wristbands, motion detectors, smart phones, wall buttons, pull stations, voice activated systems, etc. **Fall Detection or Management:** detects falls and sends out an alert in the event of a fall.
- ⁶ **Brain Fitness:** cognitive training to assist in cognitive improvement and maintenance through mental stimulation. **Communication Tools for Residents and Families:** communication means such as audio calls, video calls, and sending messages. **Community Calendar/Newsletter Software:** for the creation, publication, and/or distribution of information on community news or scheduled events. **E-Learning:** Multimedia based system that provides a means of learning through public internet. **Electronic Gaming System:** projects interactive media onto a visual display medium through electronic, digital, or computer based device where users can interact with displayed content through input devices for purposes of play. **Integrated Fitness Systems:** exercise equipment that is personalized for each user and tracks user progress. **Internet Based Services – TV:** provide media content, such as television shows, through the public internet rather than over terrestrial television networks such as cable, satellite, or over-the-air based systems. **Internet Services – Social Media:** Web-based applications and services that allow users to create digital media and share throughout an online network.



ABOUT THE AUTHORS

Sheila Garner worked for more than forty years in senior housing. As a leader in the operations of senior communities, Ms. Garner served as a coach and mentor to senior living executives who continue to make their mark to advance senior living to its fullest potential. With a passion for new technologies, she consults and supports entrepreneurs that are working in the senior aging space.

Paul Gordon has worked with senior living developers and operators for over 40 years. He is a partner at the San Francisco law firm of Hanson Bridgett, LLP and is General Counsel to ASHA. He has represented senior living owners and operators and technology companies regarding the integration of tech applications into community operations.

Deidré Schönfeldt is a partner at Hanson Bridgett who has focused in the Health and Senior Care area for almost 20 years. She represents a variety of senior living and care providers and tech/start-up companies working in the senior care space. The scope of her expertise includes specialization in HIPAA, state privacy and security requirements, notification of data breach laws, health information technology, information governance, and cybersecurity. She is an active member of several senior care and housing focused associations.



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