



Enhancing Medication Management in Senior Living: Trends, Technology, and Data



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Data can and does drive quality and positive outcomes by identifying opportunities for improvement, reducing risk for adverse events and medication-related problems, and identifying trends early on. However, the amount of data can be overwhelming. Analyzing, interpreting, and applying data can also be challenging and intimidating.

This white paper highlights the critical role of pharmacy services in senior living communities and demonstrate how data-driven insights can lead to improved outcomes, enhanced efficiency, and continuous quality improvement. By examining the current landscape and leveraging insights from electronic medication administration records (eMAR), we will showcase the value of comprehensive pharmacy support in addressing the complex medication needs of older adults.

Overview of PharMerica Senior Living

PharMerica Senior Living is committed to serving communities nationwide by delivering personalized pharmacy care through dedicated local teams. Our approach combines the familiarity and personal touch of a neighborhood pharmacy with the extensive resources and reliability of a national network. This synergy allows us to enhance senior health and well-being, alleviate the burdens on staff, and maintain the highest standards of service and trust.

Our strengths lie in our localized approach, comprehensive services, and senior living expertise. We provide essential clinical services, including polypharmacy management and proactive falls risk initiatives, ensuring holistic resident care. Our streamlined processes ease operational burdens on staff, allowing them to focus on residents.

PharMerica Senior Living's cutting-edge processes contribute to safety by helping ensure medications are administered and stored safely and that risks for medication errors, adverse events, and other medication-related issues are identified and promptly addressed. At the same time, PharMerica Senior Living provides insurance assistance through personal billing experts who help residents navigate their plans to reduce costs.

The Landscape of Senior Living

The over-65 population is the fastest-growing segment in the nation. There currently are [over 60 million older adults in the U.S.](#), a number [expected to grow to 80 million](#) by 2040. About [2.1 million](#) older adults live in senior housing or residential care communities, and 70% are women. At the same time, [9.5 million](#) people reside in long-term care facilities, such as nursing homes or rehab facilities.

In the U.S., older adults are more likely to have one or more chronic conditions such as diabetes, arthritis, or heart disease. In fact, approximately 80% of adults aged 65 or older have at least one chronic condition, and 68% have two or more. At the same time, older adults are most likely to be [hospitalized](#) because of sepsis, COVID-19, heart failure, arrhythmia, or heart attack.

Senior living is changing and evolving with this population. Current trends include:

- **Solo aging.** More seniors are living independently, either by choice or circumstance. They want senior living with support to keep them independent and enable social connections.
- **Focus on the middle market.** According to [government statistics](#), Boomers have an average retirement savings of \$202,000 and nearly half of those ages 55-64 report having no retirement savings at all. More than ever, these seniors are financially incentivized to stay independent and healthy and count on appropriate medication management to achieve these goals. They are seeking senior living options that offer a la carte services so they can choose those that fit within their budgets and preferences.
- **Desire for variety.** Many older adults don't want homogeneity. They seek a variety of dining options, intergenerational connections, spaces for their families to visit, and opportunities to try new activities, hobbies, or even careers.
- **Home- and community-based services (HCBS).** A growing number of communities offer HCBS, a product line that is increasingly used by residents.

[About 2.1 million older adults live in senior housing or residential care communities and 9.5 million people reside in long-term care facilities.](#)

Sources: retirementliving.com and theseniorlist.com



- **Focus on longevity and well-being.** Increasingly, seniors want to add years to their lives and life to their years. They are focusing on brain health, nutrition, and exercise that maximizes strength and mobility. They want communities that support these goals with amenities like onsite medical clinics, telehealth spaces, state-of-the-art fitness centers, and access to dietitians and personal trainers.
- **Memory care.** According to the Alzheimer’s Association, the number of people with Alzheimer’s disease is expected to double by 2050. In the meantime, nearly half of all people aged 65 and older have some type of memory or cognitive impairment. As a result, a growing number of retirement communities include a memory care program or unit.

When asked about senior living trends, Lisa McClure, senior vice president of senior living at PharMerica, added: “Three significant trends come to mind: owner and operational management changes, creating feelings of instability for residents and staff; the need for highly personalized services catering to individual residents; and the increasing complexity of health conditions among the resident population.”

As all of these trends emerge, so do changes to the health care system. Among the most significant, the Centers for Medicare & Medicaid Services (CMS) has determined that all Medicare and most Medicaid beneficiaries must be in a value-based care arrangement by 2030. Value-based care focuses on achieving better outcomes while reducing costs. Under this system, providers are incentivized to offer efficient care that produces the best possible outcomes and take accountability for both quality and cost.

Whatever setting residents are in, medications play a key role in their efforts to stay healthy and out of the hospital or emergency room. Pharmacists – with the use of tools such as eMARs – provide necessary services and support, including medication oversight, drug reviews, medication therapy management, and staff education and training.

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Lisa McClure, Senior Vice President of Senior Living at PharMerica





Medication Management Challenges

Medication management contributes significantly to quality of care and positive outcomes. But this is also a challenge in senior care. Picture a dedicated med tech navigating the complexities of medication orders. Then consider that this complexity has increased significantly, because of:

- **Polypharmacy:** Many residents are prescribed multiple medications, sometimes exceeding 15 different drugs. This can lead to challenges in managing drug interactions and ensuring adherence.
- **Variety of medication types:** Medication orders include not only daily pills but also complex medications such as sliding scale insulin, steroid tapers, injectable biologics, and medications with specific vitals parameters or atypical schedules.
- **Operational demands:** The volume of medications administered daily requires operational precision and efficiency. In a typical 100-resident community, approximately 1,400 medications are passed each day. This task falls heavily on med techs, whose roles are expanding to accommodate the increasing complexity of medication management.

Here are some numbers that highlight the challenges of medication management in senior care:

- **Average medications per resident:** In a typical 100-resident community, the average number of medications per resident is 15.
- **Polypharmacy prevalence:** 15% of assisted living residents have more than 15 medications prescribed for routine use, and 35% have more than 15 medications prescribed for scheduled or PRN use.
- **DEA scheduled drugs:** 20% of assisted living residents and 40% of memory care residents take at least one DEA scheduled drug.

Medication management is also complicated by the circumstances, needs, and issues of each resident. Health literacy, finances, family support (or lack thereof), and personal goals all contribute to adherence and to their ability to manage their medications successfully. For instance, one study found that more than half of older individuals were on a potentially inappropriate medication. The authors determined that pharmacist intervention and a medication therapy management process contributed significantly to resolving this issue. Getting a valid prescription ordered in a timely manner and addressing any clarification needed, such as obtaining allergy information, can also be a challenge.

Operational Realities

The operational realities of medication management in senior living are multifaceted. Communities must ensure that medications reach the right residents at the right times. This involves:

- **Storage and tracking:** Communities must store and track hundreds of medications while balancing security with accessibility. This means efforts such as keeping medications away from moisture and heat; ensuring medications are maintained at proper temperatures; appropriate use of technology such as automated dispensing systems; and following strict regulations for the storage, dispensing, and disposal of controlled substances. Communities also need a system in place for emergencies or disasters, such as power losses or evacuation situations.
- **Med tech responsibilities:** Med techs are becoming “universal workers,” with expanded roles that include medication administration, resident care, and clinical operations. They are responsible for administering meds, recording vital signs and other data, and performing some diagnostic tests, all while complying with regulations and safety standards. Med techs are key team players in assisted living, where the acuity of residents has increased significantly. According to [recent statistics](#), nearly half of assisted living residents have a diagnosis of Alzheimer’s disease or other dementia, 3 in 10 have heart disease, and nearly a third have depression.

Data-driven insights and eMARs help staff manage clinical, operational, and staffing challenges. They improve accuracy, reduce errors, enhance productivity, enable real-time data to monitor health trends and detect risks, and help ensure regulatory compliance with digital documentation and streamlined audits.

Of course, there are barriers to making the most of data-driven insights. These include staff resistance to technology, high staff turnover, and limited interoperability. Some of these can be overcome with greater training, continuing staff education, and positive reinforcement. Interoperability can be a greater challenge, but providers can work with their vendors to ensure eMARs, EHRs, and other technology align with staff workflows.



The Role of Pharmacy Services in Senior Living

The senior care pharmacist has specialized knowledge and training in geriatrics, geriatric pharmacotherapy, and medication-related needs of the older adult population. CMS defines senior care pharmacists as “those pharmacists involved in skilled nursing facility operations and clinical care of residents.”

This pharmacist has many roles, including:

- Helping to reduce medication-related problems and improve therapeutic outcomes
- Conducting medication regimen reviews
- Identifying and helping to address medication side effects and the potential for adverse events
- Making treatment or medication recommendations that address side effects or interactions, enhance safety, reduce costs, and improve adherence
- Identifying untreated or undertreated health issues or complaints
- Educating residents, families, and care team members about medication management
- Working with residents, families, and care team members on chronic disease state management

Senior care pharmacists also participate in community quality assurance programs, conduct clinician training sessions, and ensure appropriate clinical practice guidelines are used by staff and others. In the community, these pharmacists also support staff with:

- Policies and procedures for medication administration, management, and disposal
- In-service training programs on medication administration and management
- Recommendations for changes to medication regimens, including therapeutic alternatives or dose reductions
- Issues like fall prevention, behavioral management, and chronic disease state management
- Legal and regulatory requirements
- Antibiotic stewardship programs
- Formulary management
- Immunizations and vaccine education for staff and residents



Whatever setting they practice in, pharmacists contribute to better outcomes for older adults. Several studies have documented the positive impact of pharmacists on care. [One study](#) found that pharmacists had a positive impact on managing cardiovascular disease risk factors, reducing blood pressure and cholesterol, and smoking cessation. [Another review](#) showed an association between pharmacists' interventions and reductions in blood pressure.

People often think that technology makes health care less personal. In reality, the opposite is true. Tools like eMARs and AI let practitioners provide person-centered care that addresses each individual's needs and helps ensure they are taking the most appropriate medications with the least potential for side effects and adverse events.

Pharmacists increasingly use digital health technology, ranging from clinical decision support systems, computerized provider order entry, e-prescribing, and eMARs to automated medication-dispensing systems and telemedicine, to improve medication management. [Numerous studies](#) have shown that such technologies may offer benefits like reducing falls and medication errors.

Falls often result in an emergency department visit or hospital stay and can lead to disability and even death, so it isn't surprising that there is a growing focus on medication management to reduce fall risk. For instance, integrating pharmacogenomics testing and software into a fall reduction plan is increasingly popular. This technology enables pharmacists to identify medications that pose fall risk, providing actionable insights and enabling precision medicine. Through optimized dosing and proper monitoring, pharmacists can help improve resident safety by preventing falls and other injuries.

This technology improves operational efficiency by streamlining processes and enabling nurses to spend less time on med-pass and more time on direct resident care. Systems and software that enable real-time information exchange also help prevent gaps in communication, a common cause of medication errors.

Pharmacists can have a positive impact on managing cardiovascular disease risk factors, reducing blood pressure and cholesterol, and smoking cessation.

Source: pubmed.ncbi.nlm.nih.gov





Medication Management and Technology

Every Medicare Part D plan must have a medication therapy management (MTM) program. According to the [Centers for Medicare & Medicaid Services](#) (CMS), the program must:

- Ensure optimum therapeutic outcomes for targeted beneficiaries through improved medication use
- Reduce the risk of adverse events
- Be developed in cooperation with licensed and practicing pharmacists and physicians
- Coordinate with any care management plan established for a targeted individual

Technology including CPOE, clinical decision support systems, eMARs, and interoperable EHRs help pharmacists deliver timely, accurate medication therapy management programs.

Vendor Insights: The Power of Data

Nica Erickson, Pharmacy Program Manager at PointClickCare, noted that the use of eMARs and data-driven pharmacy services helps overcome some of the challenges senior communities face. "With simplified workflows and elimination of paper records and manual processes come increased efficiency, accuracy, and safety," she noted. Strong integration of data allows for more accurate medication administration and:

- Allows staff to spend more time with residents and less time managing orders
- Enables fewer calls and faxes between the community and the pharmacy, while making it more expedient to get resident status updates or order changes to the pharmacy
- Enables greater visibility into problem areas such as late or missed med passes or resident refusal of medication
- Provides real-time inventory management of controlled substances
- Identifies opportunities for quality improvement
- Paints a current and accurate picture of what happens on a daily basis

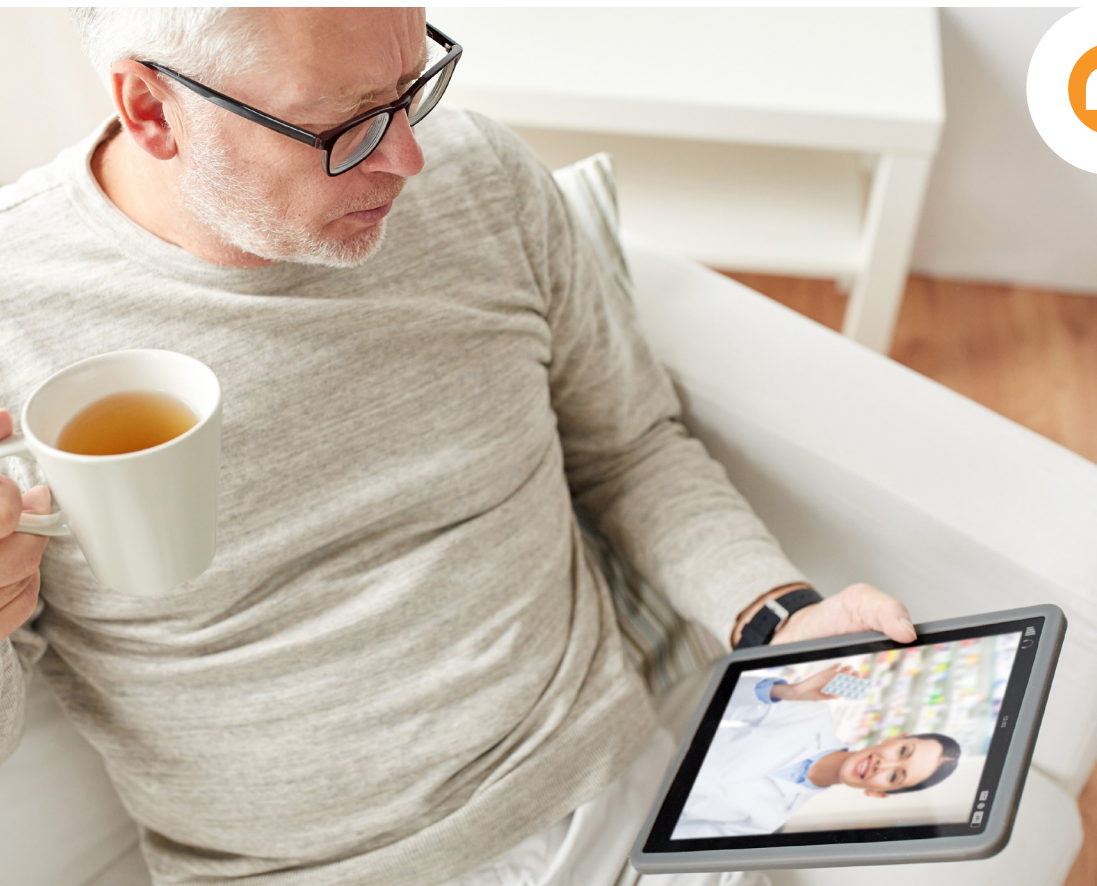
Particularly in a large community, Erickson said, “having a dashboard perspective about what is happening with residents and staff every day enables staff to identify problems or high priority tasks that need to be addressed quickly.” At the same time, all the medication-related modifications are right in their workflow, so they can see any issues that need to be addressed. Additionally, eMARs increase efficiency for staff by providing a quick view of residents, orders, medication administration, and more with just a few clicks.

Erickson added, “Having the direct sync between the pharmacy system through the integration also enables automatic updates to the EHR. It connects all those systems together, so there is less risk of errors. By ensuring that what’s in the pharmacy system, what’s in the eMAR, and what’s on the labels all match, everything flows together.”

Communities want to keep their residents happy and healthy without having to go out to other care environments. By having all the data and information in one place, Erickson noted, “They’re able to see if there’s something ‘off’ that needs to be addressed.” While medications are a significant part of this, data on issues like activity engagement and nutrition can help identify and address problems early. This can help keep residents out of the emergency room or hospital and enable communities to resolve issues onsite.

View from the Inside: The Pharmacy and eMARs

“As senior living is evolving and moving into the electronic world, we see improved accuracy where the pharmacy order integrates back to the eMAR and we’re not dependent on a nurse to update the paper medical records,” Amy Mayes, vice president of implementation at PharMerica, said. She added that when documentation is done and shared in real time, it improves accuracy and enhances team productivity. However, she says the greatest benefit of this technology is the ability to prove regulatory compliance. Having an electronic data trail creates a clear, accurate, current picture of what is happening with each resident at any given time.



“Having a dashboard perspective about what is happening with residents and staff every day enables staff to identify problems or high priority tasks that need to be addressed quickly.”

Nica Erickson, Pharmacy Program Manager at PointClickCare

“PharMerica’s strategic partnerships with senior living communities enable the use of data and information to improve quality of life, outcomes, and potentially age in place in the least restrictive environment.”

Lisa McClure, PharMerica Senior Vice President of Senior Living



Senior communities can showcase the positive impact of eMAR data through accuracy and compliance in medication administration and tracking, electronic auditing, and real-time monitoring. This data also can be used to show family members what is being done for their loved one. Mayes said, “You can produce a quality care report to confirm what is being done and to confirm for them that their loved one is in the right place and that they are getting the best care for their money.”

At the same time, said Maryanne Owcharuk, vice president of client strategy and partnerships for PharMerica Senior Living, “eMARs can identify medical exceptions, and we can run a report to determine where and why there were medical exceptions and determine if there are opportunities to minimize them by using a preferred pharmacy.”

There are many data points and much information necessary to successfully manage medications. “If all this could be housed in the eMAR and then communicated effectively, this can create a repository of information that enables us to care for residents from a medication regimen perspective, as well as educating and motivating adherence on the part of each individual,” said Owcharuk. Having information in one place is particularly important, she noted, when residents are seeing multiple specialists and getting their prescriptions ordered and filled from different sources.

According to Lisa McClure, PharMerica Senior Vice President of Senior Living, PharMerica’s strategic partnerships with senior living communities enable the use of “data and information to improve quality of life, outcomes, and potentially age in place in the least restrictive environment.”

Future Directions and Innovations

The use of technology has come a long way in a short time, but the journey is not over. There are more changes to come, such as:

- **New adherence tools.** Pill boxes, blister packs, alarms, and other tools are not guarantees of adherence. Watch for growing use of smart watches, smart toilets, apps, and other devices to serve as reminders and monitors for vital signs and other health indicators that may suggest poor adherence.
- **Remote monitoring.** Telemedicine will continue to let residents receive medication reviews, consultations, and other interventions without leaving their homes.
- **Automatic medication dispensers.** These devices can store multiple medications and dispense them at scheduled times, checking medication adherence with each dose. They also can share real-time data with the pharmacist and other care team members to help identify issues.
- **AI-powered systems.** AI technology can be used to tailor a resident's medication regimen and enable automatic dose reductions. AI also is being used to assist health care providers in creating treatment algorithms.

McClure added, "We are excited about the innovation PharMerica Senior Living continues to bring to the market with automation and AI to enhance resident outcomes and medication delivery systems."

CQI and Data

Continuous quality improvement (CQI) is designed to improve the care experience through a systematic approach that designs, tests, and executes changes based on real-time outcome measures. Data is essential both to guiding and assessing CQI.

However, [research has shown](#) that the vast majority of information generated in health care is unused. In [one survey](#), 80% of physicians reported not trusting the information they have available to them. It is essential for everyone on the team to understand their role in data collection and documentation and for team leaders to know how to employ data to identify trends, issues, and opportunities for CQI.

Data must also be current. The benefit of real-time data collection and sharing is that it reflects what is happening now and not what happened in the past that may no longer be relevant.

Support and Guidance

PharMerica Senior Living has the expertise, resources, and materials to enable your community to make the most of eMARs and other technology. Pharmacy has long been at the cutting edge of health care technology, and now we bring this expertise to helping senior living communities and their residents thrive in the evolving world of senior living.

"As senior living looks to the future," said McClure, "PharMerica Senior Living is continuing to work on strong partnerships to improve resident outcomes, individualized approaches that empower residents, and serving as a stable, consistent provider to help residents and communities feel secure."



PharMerica Senior Living is dedicated to providing exceptional, personalized care with a neighborhood-focused and resident-centric approach. We offer comprehensive pharmacy services tailored to meet the unique needs of your community, ensuring optimal care for your residents. Our extensive library of senior living resources supports wellness directors, chief clinical officers, and executive directors with timely recommendations and practical strategies. We also offer valuable information for residents and their families. Visit pharmerica.com/senior-living to access our resources and join our Illuminate community.



Helping communities Thrive.



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