CARE 2.0 Augmenting Human-Centered Care Through Artificial Intelligence

Intro: A New Era in Home-Based Care

The home-based care industry has become used to change but in 2025 the pace and scale of transformation are unlike anything seen before. The mix of technological breakthroughs, shifting regulations, a fluctuating business environment, and persistent workforce challenges have created a unique opportunity to augment automation. A transformation of this scale marks the start of a new era for home-based care providers who can adapt and evolve their operations to continue delivering efficient and effective care at home.

The Tech Opportunity: From Disruption to Design

The traditional model of home care—largely manual, reactive, and labor-intensive—can be reimagined with the right digital infrastructure. As they build it, leaders must also consider designing systems that are deeply empathetic and human-centered. The right approach is a balance of adaptive care workflows and real-time decision-making support that can be properly constructed to provide much-needed efficiency that can be scaled across an organization.

Top Emerging Technologies Predicted to Impact Care Delivery by 2030:

• Artificial Intelligence	60%
• Blockchain and Secure Health Data	31%
• Predictive Analytics	29%
• Internet of Things (IoT) for Patient Monitoring	27%
• Robotics and Automation	22%
• Virtual Reality for Patient Therapy	22%

Source: Axxess 2025 Industry Trends Report

Designing with Empathy

Automation in care must never feel cold or impersonal. Instead, it should amplify the caregiver's ability to connect with and respond to a patient in need. This means designing interfaces that are intuitive for the end user with workflows that respect the dignity of both patients and providers.

Instead of focusing solely on efficiency and data capture, the design team should start by shadowing nurses during their visits, listening to their challenges, and understanding the emotional weight of their work.

Designers who shadow nurses can often learn that nurses sometimes feel rushed when documenting care, which can interfere with their ability to connect meaningfully with patients.

Voice-to-text documentation with ambient AI enables nurses and caregivers to speak naturally during or immediately after a visit, capturing their observations, assessments, and care plans without breaking connection. The AI listens quietly in the background, transcribing notes in real time, flagging missing elements, and even suggesting improvements based on clinical standards.

And because the AI is ambient, it doesn't intrude. It supports the caregiver's workflow, respects privacy, and ensures that every note is complete, payer-compliant, and audit-ready.

Ambient AI is an example of a passive technology tool that operates quietly in the background. Passive tools observe, collect, or assist without requiring direct interaction from the patient or caregiver. Other examples include remote monitoring sensors or predictive analytics that flag risk without interrupting care. Passive technology allows care to remain human-centered by minimizing disruption.

Active technology on the other hand, involves direct interaction such as mobile apps, voice assistants, or digital checklists used during visits. When thoughtfully designed, active technology empowers patients and caregivers. It can offer choice, clarity, and control—especially when interfaces are intuitive, language is inclusive, and the experience feels collaborative rather than clinical.

The key to both is empathy in design. Whether passive or active, technology should always serve the relationship and not replace it.

The Road Ahead

The future of care is not about replacing humans with machines—it's about empowering humans through machines. As we enter the age of Care 2.0, tech professionals have a unique opportunity to shape a system to make it smarter and more responsive to support the care at home industry.

How AI Supports Clinical Decision-Making in Home-Based Care

Clinical Decision Support (CDS) refers to a set of tools and systems that provide healthcare professionals with intelligently filtered patient-specific information to enhance decision-making at the point of care. These tools aim to improve clinical outcomes by offering timely insights, alerts, recommendations, and diagnostic support based on data from electronic health records (EHRs), clinical guidelines, and real-time patient data.

1. AI-Powered Diagnostic Assistants

AI tools analyze complex patient data such as symptoms, medical history, and wearable device inputs to assist clinicians in diagnosing conditions remotely. These assistants can help reduce diagnostic errors and speed up treatment decisions.

2. Predictive Analytics for Patient Deterioration

Machine learning models can monitor real-time data from home-based sensors and wearables to predict early signs of deterioration (e.g., sepsis, heart failure). This enables care teams to intervene before a crisis occurs, reducing hospital readmissions.

3. Natural Language Processing (NLP)

NLP tools extract critical information from unstructured clinical notes, voice inputs, or patient messages. This ensures no important details are missed and supports more comprehensive assessments in home care settings.

4. AI for Patient Triage and Suitability

AI models help determine which patients are appropriate for home care versus hospital care by analyzing risk factors, comorbidities, and social determinants of health. This supports safe and efficient patient placement.

5. Personalized Care Recommendations

AI-driven CDS systems can tailor care plans based on individual patient profiles, medication history, and lifestyle data, ensuring more personalized and effective interventions at home.

A Case Study in How SimiTree Uses AI Functionality for Value-Based Purchasing

SimiTree uses robotic process automation (RPA) to automate data acquisition where native APIs aren't available.

As part of its revamped Value-Based Purchasing solutions, known as "VBP IQ", SimiTree leverages RPA to automate data acquisition from premier third-party quality, outcomes, and patient satisfaction platforms. The solution uses a combination of machine learning and time-series forecasting to provide industry-leading predictions and key drivers for putting more "points on the board" with VBP.

In the last nine months, clients using VBP IQ are projected to see their VBP revenue adjustment percentage increase by 1.5%. For example, on average, if a client's 2025 revenue impact percent based 2023 performance was -1%, the VBP IQ solution is projected to help them see a +0.5% revenue impact for the following year.

Feedback has been strong with one client using VBP IQ to identify their 10 lowest performing clinicians and give them focused education in one-on-one meetings. Within the first six months of being on the solution, their total performance score improved from 18.43 to 28.83, with noted gains in Dyspnea and Oral Medication outcomes as well as patient satisfaction scores as a whole.

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The intuitive interface of VBP IQ highlights clinicians based on measures that can be improved so that leaders can set improvement targets for these clinicians and receive instant revenue impact projections. Advanced machine learning classification models shine a light on what matters most to each patient population in terms of driving improvement in the two standalone VBP measures for patient satisfaction which are “willingness to recommend” and “agency rating.” Instead of “boil the ocean” strategies which are rarely effective, SimiTree’s classification models provide precise areas of focus to maximize impact to the standalone measures.

Furthermore, SimiTree leverages a combination of RPAs and machine learning within its revenue cycle management solution by ingesting data from multiple third-party source systems and providing predictive analytics around cash postings on a weekly and monthly basis. This helps clients better anticipate cashflow for key metrics such as days cash on hand .

What to Weigh When Assessing AI in Home Care

As artificial intelligence begins to shape the future of home-based care, organizations must move beyond the hype and evaluate solutions with a clear-eyed focus on safety, outcomes, and operational fit. AI has the potential to solve many of the daily recurring challenges providers face, but only when implemented responsibly.

Concerns about AI use in home-based care was measured during the 2025 Axxess Industry Trends Report published in January 2025. Respondents worried whether AI-enabled information is accurate and trustworthy.

What is your main concern about integrating AI into your operations?

• Ensuring Reliability and Accuracy	24%
• Addressing Data Privacy and Security	20%
• Managing Implementation Costs	6%
• Training Staff and Facilitating Adaptation	13%
• No Concerns at This Time	11%
• Lack Of Understanding of AI	7%

Source: Axxess 2025 Industry Trends Report

Critical Factors to Consider

This section outlines the critical factors that home care leaders should weigh when assessing AI tools. From compliance and security to workflow impact and vendor viability, each factor plays a role in determining whether a solution truly supports care delivery or simply adds complexity.

Patient Safety, Compliance, and Auditability

Prioritize solutions that are fully HIPAA-compliant, generate a clear audit trail suitable for regulatory review, and offer transparent reasoning behind AI-generated outputs. The ability to explain “why” a decision was made is essential for clinical and compliance integrity.

Security Posture for Protected Health Information (PHI)

Require vendors to demonstrate robust security credentials, including SOC 2 or HITRUST certification (or equivalent), end-to-end encryption (in transit and at rest), single sign-on (SSO), multi-factor authentication (MFA), access logging, recent penetration testing, and clear policies on data residency and business continuity/disaster recovery (BCDR).

EMR Fit and Interoperability

Integration quality is the strongest predictor of ROI. Favor solutions with certified EMR integrations, support for SSO, FHIR/USCDI standards, EVV alignment, and HIE participation. Use robotic process automation (RPA) only as a last resort due to its fragility and maintenance burden.

Direct Line to Outcomes

Evaluate how the solution impacts key performance indicators such as HHVBP measures, avoidable hospitalizations, OASIS/POC accuracy, HIS/claim cycle speed, and referral conversion rates. If the solution doesn't clearly address a known problem or deliver measurable outcomes, deprioritize it.

Net Workflow Gain

Demand quantifiable ROI in terms of time saved per documentation task, reduction in QA edits, faster intake and scheduling, or improved after-hours triage. Ensure the solution enhances workflows without adding cognitive load or unnecessary app clutter.

Adoption Realism

Look for mobile-friendly, voice-enabled tools with minimal training requirements. A strong change management plan—including super-user identification and measurable adoption milestones—is critical for successful implementation.

Economics with Teeth

Model the full total cost of ownership, including licensing, services, and internal IT time. Require a minimum ROI of 1.5× within 12–24 months. Be cautious with "soft savings" unless they are tied to measurable throughput improvements or error reduction.

Vendor Viability and Governance

Choose vendors with proven success in home care, transparent product roadmaps, clear communication on model changes, version control, and rollback capabilities. Ensure your data remains yours, and prohibit training on PHI without explicit consent.

Pilot, Measure, Decide

Conduct time-boxed pilots with defined baselines and go/no-go criteria. Move forward only if multiple hard metrics improve without compromising safety or quality.

Based on our Axxess 2025 Industry Survey and Report respondents noted the following:

What technology investments are you prioritizing in 2025?

• Staff training and engagement tools	53%
• Care coordination and EHR systems	47%
• Patient engagement platforms	31%
• Remote patient monitoring, telehealth, and diagnostics	29%
• Predictive analytics and data management	27%
• AI and automation in care delivery	24%

Source: Axxess 2025 Industry Trends Report

Ultimately, the goal is to ensure that AI augments the human touch in care. Solutions must be designed with empathy, implemented with accountability, and measured by their ability to return time to staff, improve patient outcomes, and elevate the standard of care.

Authors

Christina Andrews
Senior Director of Professional Services, Axxess

Mike Brents
Managing Director, Technology Consulting, SimiTree