

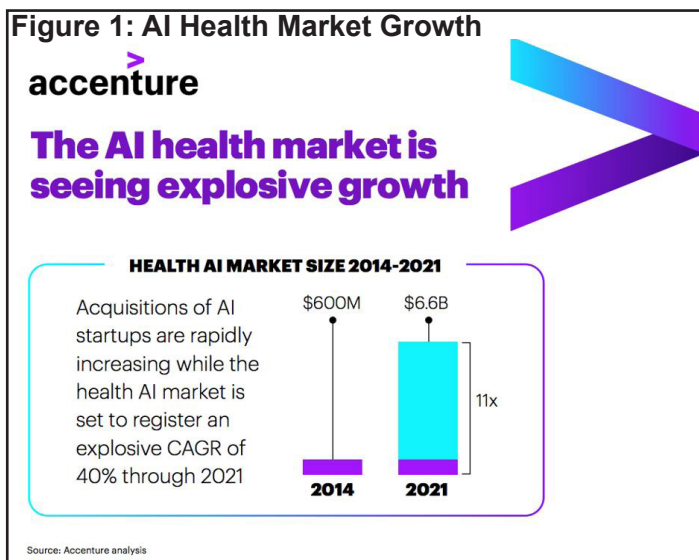


## FEATURE

# AI Provides Cost-Saving Solutions that Improve the Quality of Care Making Long-Term Care Intelligent

Owners and operators of long-term care facilities (LTCs) are getting serious about finding solutions to the critical challenges they face. Among them include the high employee turnover rate, increasing regulations, shrinking budgets, and the growing aging population. These issues are compounded by the endless pressure to provide patient-centered care while meeting the demands of the Five-Star Quality Rating system.

Artificial Intelligence (AI) offers a growing arsenal of applications that can address these issues, bringing improvements in costs, job satisfaction, quality, and access to care. More importantly, according to a report by Accenture<sup>1</sup>, “...when combined, key clinical health AI applications can potentially create \$150 billion in annual savings for the U.S. healthcare economy by 2026.” Further, Accenture notes that is expected to see a compound annual growth rate (CAGR) of 40% through 2021 (Figure 1).



### AI Thinks and Pays for Itself

AI in health represents a collection of multiple technologies that act and learn so that they can perform administrative and clinical healthcare tasks and contribute to diagnosis. Practical applications include interventions to reduce the number of falls, telehealth to connect specialists to patients in rural areas, instant live updates to families, 24x7 health monitoring, proactive care, and freeing overburdened staff workers from

mundane data-entry. The savings also extend to special needs plans (SNPs), where the time required for health aides can drive up significant costs per hour. An AI-assisted remote monitoring system could reduce the number of hours a patient needs, saving tremendous costs, without sacrificing the safety and care of the patient. These are practical initiatives that will increase compliance, reduce errors and improve employee morale while addressing the key challenges facing LTCs.

Hospitals are already using telemedicine to engage with patients. From 2013 to 2014, Banner Health tracked the outcomes of iCare members and found an overall 27% cost savings of \$788 per patient per month<sup>2</sup>. Hospitalizations dropped from 11.5 per 100 patients per month, “saving \$4,000 per patient each year and avoid(ing) hospital visits and readmissions,” according to Robert Herzog<sup>2</sup>, founder, and CEO of eCaring.

Primarily delivered through a combination of mobile devices, wearable sensors, big data analytics, and medical devices, AI can be used in real time, which is critical for patient intervention to reduce hospital re-admissions. Below, we discuss some of the ways AI can assist LTCs.

### High-Touch, High-Connection

The idea of using computer algorithms in place of human interaction initially may appear as a fast track for de-personalization. But the opposite is true. While it is not intended to be a replacement for a physician, AI can seamlessly provide a continuous stream of patient data that allows physicians to move from reactive to proactive patient care. Wearable devices that remotely assess a patient’s symptoms can deliver alerts to clinicians when patient care is needed, and automatically triage nurses’ time, lessening their burden. The improvements in real-time diagnostics can reduce hospital re-admissions.

### Extending the Availability of Health Care

One of the most practical and cost-saving uses for LTCs is telehealth. “Live videos shorten the miles between our patients in rural LTCs with specialists,” explained Erik Hatten, chief operating officer, American Health Companies. “This allows physicians to not only read about a patient’s symptoms and vital signs but to visualize and hear the patients, at lower cost, which improves the overall quality of care we can provide to

our residents.”

## Timesaving Workflows

Many of the non-patient care activities, including entering chart notes into a computer and ordering prescriptions and tests, can be eliminated with voice-to-text and wearable devices. The Accenture report<sup>4</sup> found that “the digital integration equates to a savings of 17% for doctors and 51% for registered nurses.” By using AI to automate mundane tasks, health care workers are free to do less data entry and spend more time doing what they enjoy—interacting and caring for patients. This brings a sense of empowerment, which can lead to higher job satisfaction and reduced turnover.

## Better Data: Better Outcomes

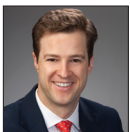
One of the benefits many are now reaping from entering data into electronic medical records (EMRs) is the enormous quantity of medical information that is now digitized and available for use by AI. This vast amount of information is being used by AI to create intelligence that improves the overall quality of care. As interoperability becomes standard, we can expect fewer health care errors and better medical decisions and patient outcomes.

Once implemented, the creative ways that LTCs will use AI technologies will continue to grow. One solution is to use these tools to keep families informed and build trust. Digital health technology makes it much easier for information to be shared with health care providers and to keep loved one’s informed and up-to-date on a patient’s condition.

## Bring AI to Life in LTCs

In order to maximize the potential benefits of AI, an organizational strategy is key. In addition to assigning a dedicated task force, Drs. Alexander L. Fogel and Joseph C. Kvedar<sup>5</sup> outline an adoption strategy framework that includes analysis, defining goals, return on investment (ROI), security, ease-of-use, and regulatory compliance.

With live data and intelligent insights, AI provides a welcome paradigm shift that brings the potential to move LTCs from reactive to proactive care. At the same time, it offers tangible solutions that can improve employee satisfaction, and tremendously lower the overall costs of care.



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1 <https://www.accenture.com/us-en/insight-artificial-intelligence-healthcare>

2 <https://money.usnews.com/money/retirement/articles/2015/06/11/long-term-care-goes-virtual>

3 <https://www.accenture.com/us-en/insight-artificial-intelligence-healthcare>

4 <https://hbr.org/2016/11/simple-digital-technologies-can-reduce-health-care-costs>