

Intelligent Payer:
HEALTH
MANAGEMENT
REIMAGINED



Applying artificial intelligence (AI) tools to payer health management functions can improve nurse efficiency by up to 40 percent, reveals Accenture analysis.

Payers use nursing resources to perform many health management activities. These range from clinical review of authorization requests and claims, to review of medical charts to collect evidence of conditions and delivery of preventive care, to direct interaction with health plan membership to help them manage conditions. Yet payers face recruitment and retention challenges as the nursing shortage intensifies and demand for healthcare services rises.

AI in health management offers much-needed relief. It augments and integrates human ingenuity and clinical expertise with intelligent digital technologies. AI can take on many of the administrative tasks that nurses do as part of their current jobs, allowing them to focus more time on functions that truly leverage their clinical expertise. Productivity and accuracy improvements come from making the most of existing resources, not reducing headcounts.

AI includes multiple technologies that enable machines to sense, comprehend, act and learn on their own.

And because AI learns and consistently applies rules based on massive knowledge libraries, it improves the speed, consistency and quality of health management reviews. This is not only a win for nurses and for payers, but for providers and members too. According to Accenture analysis, accelerating prior authorization and clinical review of claims is one of the top three areas that **US health insurers can target to use AI-driven solutions to unlock up to \$7 billion in total value in 18 months.**¹

¹Accenture, "The Intelligent Payer: A Survival Guide," 2018, <https://www.accenture.com/us-en/insights/health/intelligent-payer-survival-guide>

FEELING THE PAIN

The decades-old nursing shortage is complicating health management staffing. Unfortunately, it will only get worse. The US Bureau of Labor and Statistics expects more than one million nursing vacancies by 2024.² This is largely because the nursing workforce is aging. One-third of US nurses will be at or near retirement age in 10 to 15 years.³ Making matters worse, long recruitment timelines make it difficult to fill open positions quickly.⁴ All of this creates a growing nursing supply-side threat for payers.

This big squeeze on nursing supply could not happen at a worse time. Overall demand for medical services is increasing, which in turn drives increased health management demand. It is well documented that the nation's aging population is putting pressure on the healthcare system. Medicare enrollment is expected to grow to 77 million by 2027⁵, and per capita spending on healthcare among those 65 and older is two to three times higher than adults aged 19 to 64.⁶ This increase in utilization will drive additional demand for nursing staff to perform clinical reviews.



²US Bureau of Labor Statistics, "Employment Projections 2014-2024," December 8, 2015 at <https://www.bls.gov/news.release/pdf/ecopro.pdf>

³The Atlantic, "The U.S. is Running Out of Nurses," February 3, 2016 at <https://www.theatlantic.com/health/archive/2016/02/nursing-shortage/459741/>

⁴Pew Trust, "Why Does it Take so Long to Hire a Nurse?," November 16, 2016 at <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2016/11/16/why-does-it-take-so-long-to-hire-a-nurse>

⁵Congressional Budget Office, Medicare – Congressional Budget Office's January 2017 Baseline, January 24, 2017 at <https://www.cbo.gov/sites/default/files/recurringdata/51302-2017-01-medicare.pdf>

⁶Centers for Medicare and Medicaid, US Personal Health Care Spending By Age and Gender 2012 Highlights - <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Age-and-Gender.html>

AT THE TOP OF THEIR LICENSE

Not only are there fewer nurses to take on the demand, but some elements of the health management process are monotonous, creating inherent staffing challenges. To put it bluntly, health management work contains tasks that can be repetitive and boring. Nurses are often saddled with administrative tasks, distancing them from the ability to apply their clinical expertise, and driving attrition for payers.

The good news is that automation and AI can rebalance nurses' workloads so they focus on tasks that are higher value and therefore drive job satisfaction. Accenture analysis of client experience shows that about 35 percent of nurses' health management work is manual and repetitive due to process and technology constraints. This work—such as benefits and eligibility checks, in- and out-of-network status checks, data entry and application of basic business rules—is ripe for simple automation of rules-driven processes.

In addition, AI with analytics can streamline and augment the other 65 percent of nurses' health management work that requires judgement and experiential knowledge (Figure 1). By applying automation and AI appropriately to support the clinician's tasks, payers can drive overall efficiency gains of up to 40 percent.

Figure 1: Automation and AI can transform all aspects of nurses' health management work



RULES-BASED (ACHIEVED)

20 percent of transactions have been automated with rules-based minibots and robotic process automation (RPA)



RULES-BASED (OPPORTUNITY)

There is an additional **15 percent** in rules-based areas of opportunity that may be considered for RPA



JUDGEMENT BASED

20 percent of judgement-based processes can be augmented by AI and analytics



EXPERIENTIAL KNOWLEDGE NEEDED

45 percent of the remaining judgement work is being reviewed for AI. However, about **30 percent** will require knowledge workers

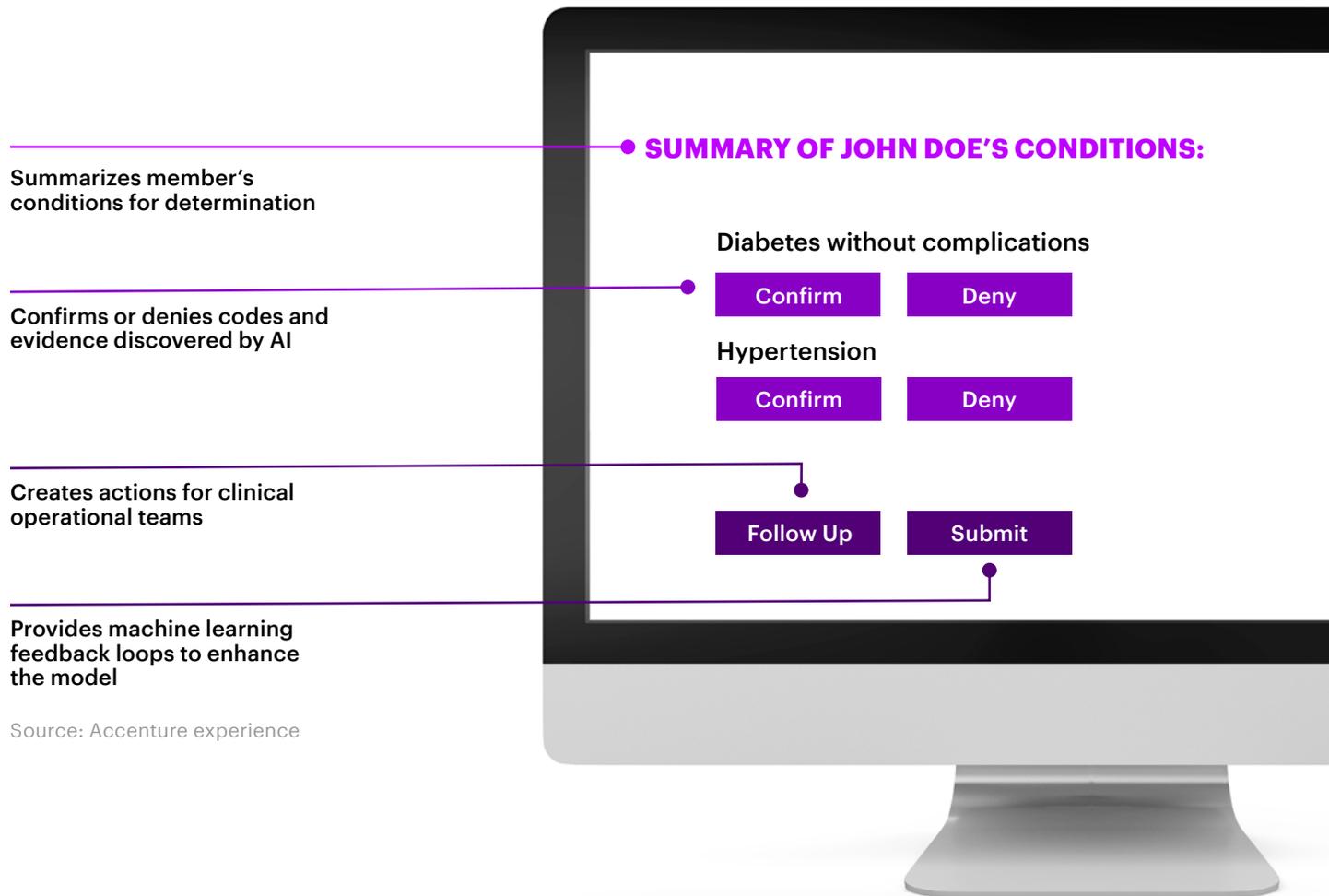
Source: Accenture analysis

A POWERFUL COMBINATION

When automation and AI take on manual steps in clinical review—such as navigating between screens and systems or culling through case notes and pages of scanned medical documents—nurses can focus on medical necessity and care delivery data, dramatically improving throughput and quality.

It works like this. AI tools pre-read documents using clinical knowledge libraries with millions of associations to identify targeted opportunities and associated evidence. The information is presented to nurses in a consolidated view, so they can review the AI outputs, analyzing and interpreting the clinical content and how to support coordination of care. Ultimately, the nurses make the clinical decision, while the automation and AI plays a support role (Figure 2). In addition, any data analyzed by the automation and AI tools is available for use throughout the payer organization.

Figure 2: Interactive user interface allows clinicians to review a chart & take action



Source: Accenture experience

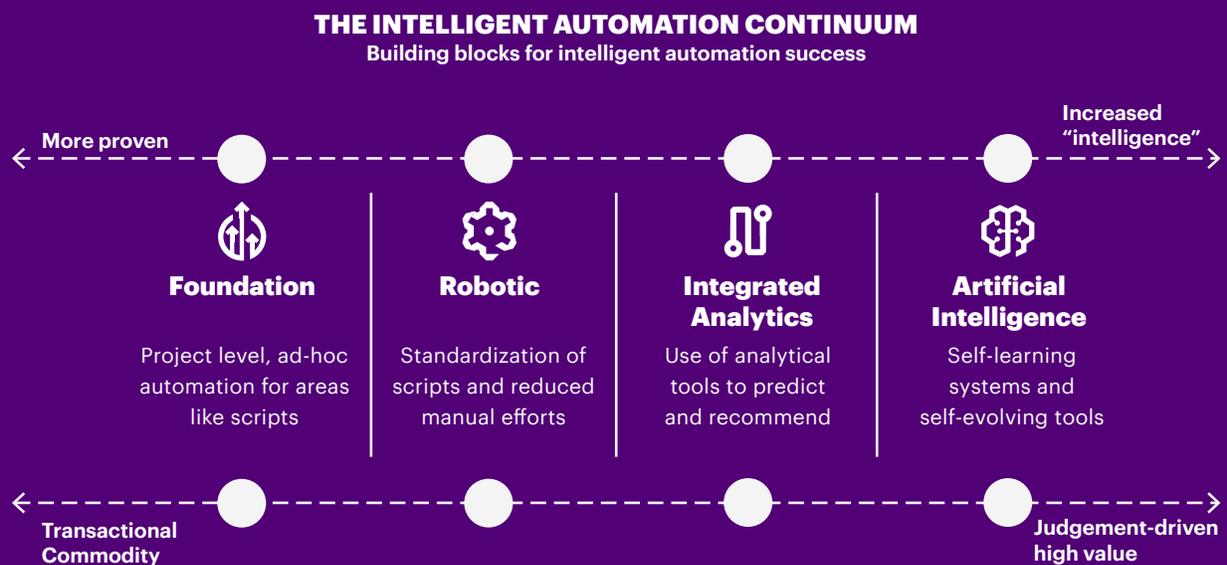
With so much fear around AI as a job threat, it is important to note that the value here is not in what AI tools do alone, but in how they augment uniquely human capabilities to help humans work better—and do better work. It is a story about humans **and** machines, not humans **or** machines. AI will not replace nurses’ judgement and clinical know-how; it will allow them to focus on tasks that require this expertise.

AI tools can also improve the efficiency and quality of health management. Accenture experience with AI for chart review for Medicare risk scoring reveals that when AI does the first review, medical coders work two to three times faster than without it. In this pilot program, AI identified 95 percent of the conditions compared to medical coders and found 0.5 to 1 more conditions per review that coders missed. Furthermore, the use of AI doubled the accuracy rate and allows for 100 percent auditability of decisions. This result demonstrates how AI can effectively support the review and analysis of clinical content.

How do advantages like these influence how nurses feel about their jobs? The results of an Accenture survey of health executives about machine learning (one type of AI) suggests a positive correlation between AI tools and nurses’ job satisfaction. Seventy-five percent of executives agree that employees feel they are doing more interesting work as a result of machine learning enabled processes. And nearly 90 percent think that machine learning enabled processes improve job satisfaction and retention.⁷

AN EVOLUTION, NOT A REVOLUTION

Automation and AI are part of the intelligent automation continuum. Payers can introduce intelligent automation to increasingly complex work—evolving from simple, rules-based automation to advanced analytics and AI, freeing nurses to focus on high-value, judgment-based analysis and decision making that leverages their clinical expertise.



⁷Accenture 2017 Process Reimagined Survey

Source: Accenture analysis

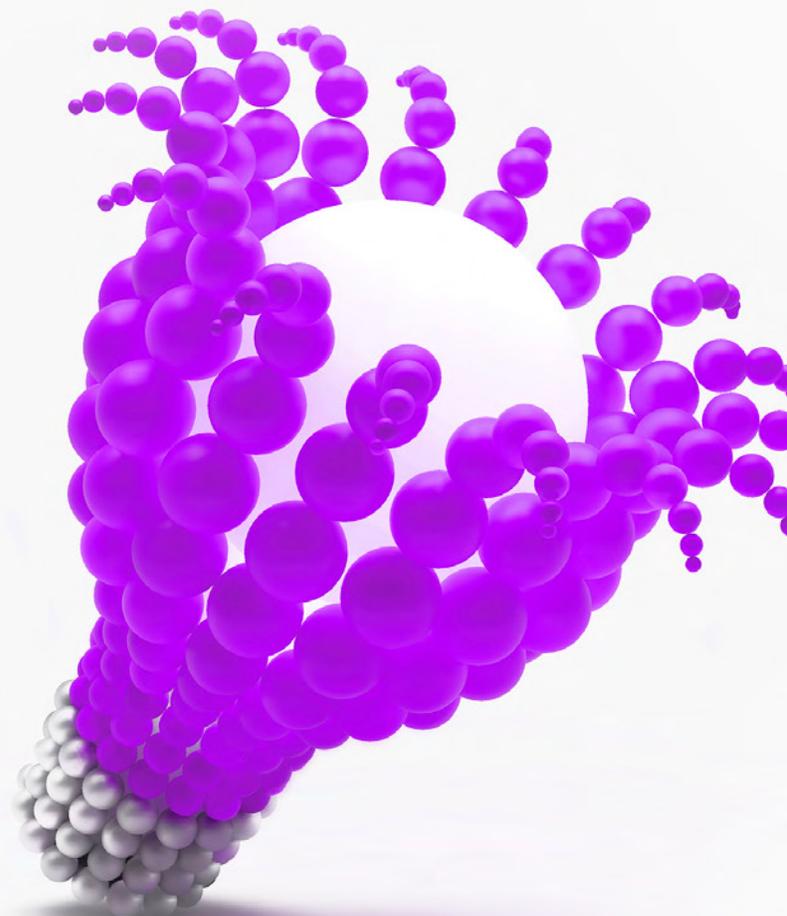
A GOOD NEWS STORY

The use of automation and AI in health management can reduce the impact of the rising RN shortage. In addition, benefits to payers can extend beyond immediate nurse staffing and retention. To maximize these opportunities, payers should first take a hard look at the traditional health management model and **shift from a disease-centric to a network-centric model**, which is better aligned with the evolving needs of health management today.⁸

A risk-based, data-driven network-centric model focuses on services that are most likely to be misused or overused based on authorization history to drive efficiencies in receipt and review of requests—and it enables health management clinicians to work at peak productivity. This new model allows for more intelligent targeting of health management, while the technology allows the work to be done more effectively.

As payers apply these technologies to this new, more streamlined model, health management can become more efficient and consistent with faster and more accurate clinical review. This is a boon for provider and member satisfaction as well as for improved regulatory compliance. And when nurses have the time to focus on case management and care coordination, they can truly put their passion into practice.

⁸Accenture, "Risk Based. Data Driven. The New Face of Utilization Management," 2016, <https://www.accenture.com/us-en/insight-health-new-utilization-management>



For more information:

AUTHORS



Brian Christian
brian.c.christian@accenture.com



Theresa Gaffney, RN
theresa.m.gaffney@accenture.com



Richard Stewart
richard.a.stewart@accenture.com

CONTRIBUTORS



Susan Mueller, MD
susan.d.mueller@accenture.com



Amy Holcomb
amy.c.holcomb@accenture.com

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@AccentureHealth



AccentureHealth

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METHODOLOGY

In 2016, Accenture performed an automation entitlement study across four of its larger client engagements for its Health Business Process Services. The scope covered an estimated 9,000 resources supporting health payer functions for four client engagements, covering an estimated 80 million members. The study identified automation potential across more than 200 discrete business processes.

ABOUT ACCENTURE 2017 PROCESS REIMAGINED SURVEY

Building on an earlier pilot study, Accenture investigated where and how companies are applying artificial intelligence to manage and change business processes. We surveyed 1,075 process professionals from large global companies representing 13 industries and 15 countries in late 2016 and early 2017. Sixty-two respondents were from US payers, providers and pharmacy benefit managers.

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