

AI TRANSFORMATION



AI Strategies in Healthcare

Executive Brief



AI in Healthcare Today

The healthcare industry is evolving rapidly with large volumes of data and increasing challenges in cost and patient outcomes. Early adopters of Artificial Intelligence (AI) in the healthcare space are reaping the benefits in terms of patient care and adding to their bottom line results, and everyone is taking notice. These companies are using AI for a number of scenarios including managing claims, detecting fraud, improving clinical workflows, and predicting hospital acquired infections. H2O.ai, the open source and automation leader in AI, is empowering leading healthcare companies to deliver AI solutions that are changing the industry.

AI Transformation in Healthcare

The healthcare industry faces significant challenges to continue to provide high quality medical care while dealing with dramatically increasing costs. With over 3.2 Trillion dollars being spent on healthcare in the United States alone, fraudsters are constantly looking for ways to take advantage of the system by filling false claims or with “creative” billing practices. Payers and providers have legacy manual processes to find issues and process claims. These processes don’t scale and leave patients and providers frustrated when payments don’t come through or outcomes are not satisfactory. Clinicians find themselves working harder than ever in a system under pressure to do more with fewer resources. This pressure and lack of adequate resources leads to mistakes and physician burnout that also adversely impact patient outcomes.

The Healthcare industry is ready for change. With the advancement of electronic medical records and other technologies including wearable fitness devices and big data infrastructure, the healthcare industry has a goldmine of data. This data can be used to predict key outcomes in operations, finance and clinical care. The key to unlocking this data and solving key issues for the industry is AI, driven by data science and machine learning. The industry can benefit across a number of areas including:

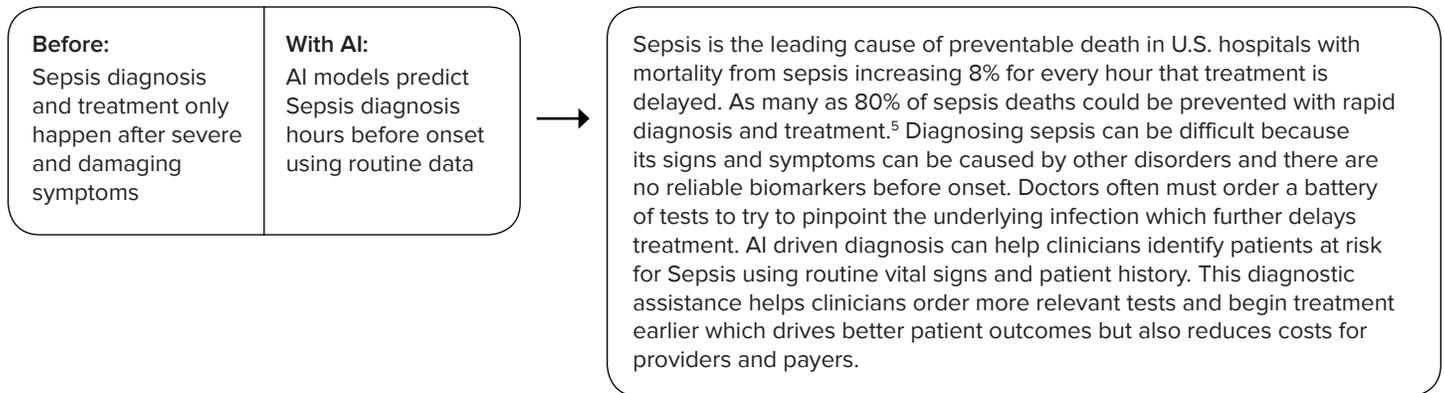
- Financial – Decrease fraud and increase profitability through increased fraud detection, improved claims management and streamlined clinical workflows.
- Operational – Improve productivity and clinician satisfaction through augmentation of existing practices with intelligent assistants and automation of tedious processes, which allows clinicians more time to spend with patients.
- Clinical – Improve patient outcomes and decrease critical issues such as hospital acquired infections, sepsis, and readmissions.

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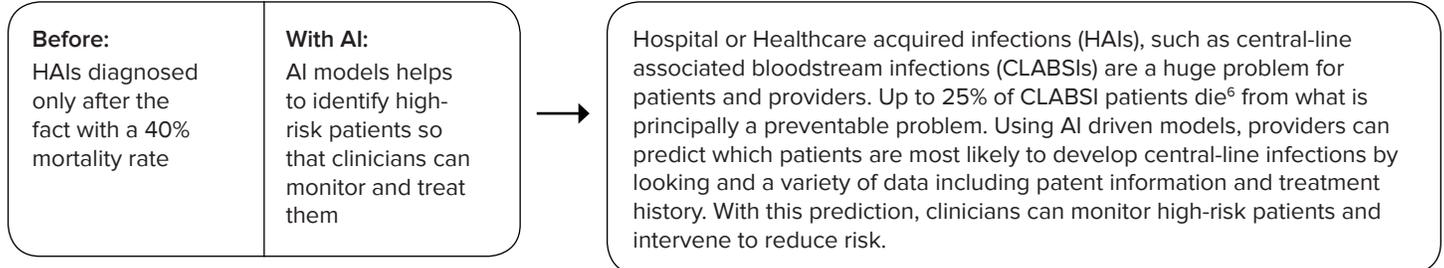
AI is expanding the opportunity and decreasing risk in healthcare today. Payers and providers are increasingly using AI in a range of applications including claims management, fraud detection, disease risk assessment, and to improve clinical workflow. The list of healthcare use cases continues to grow with major payer and provider groups working on an AI strategy.

A sampling of how AI is being used today is summarized below:

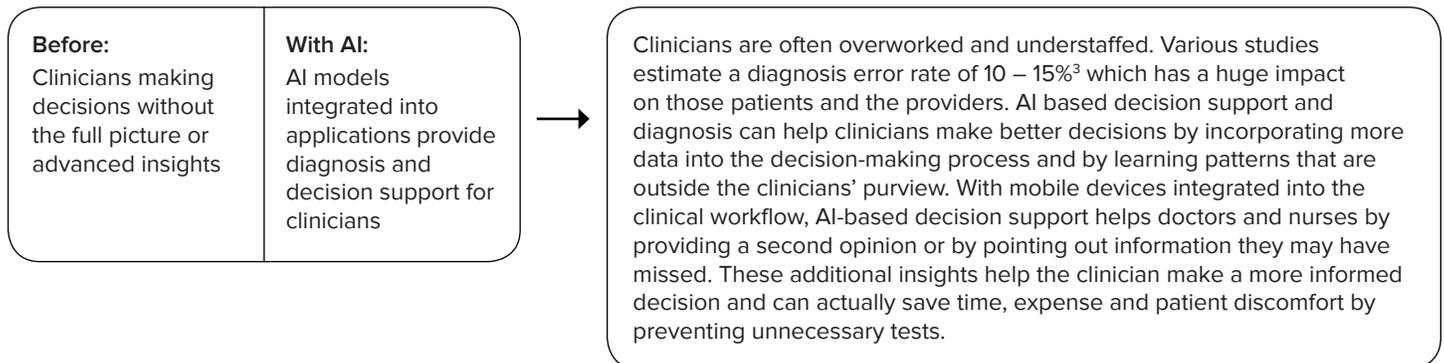
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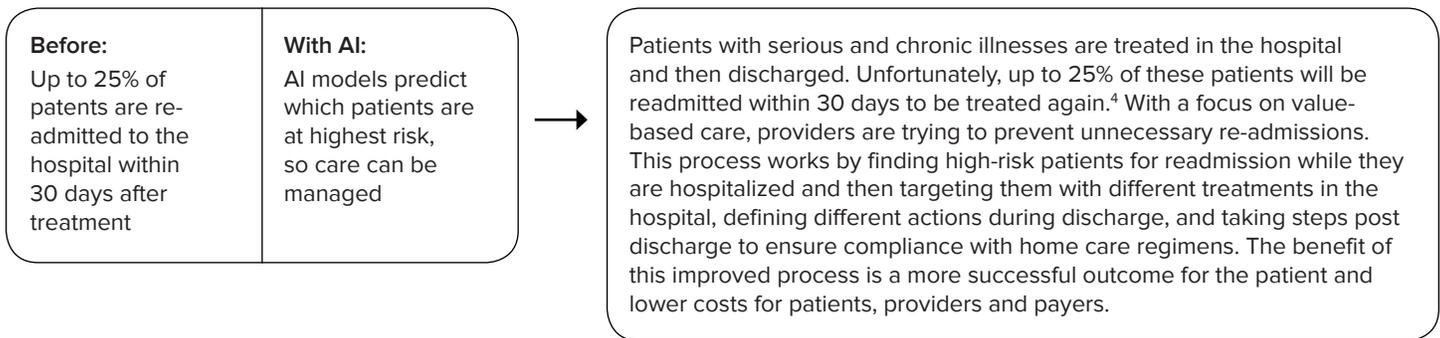
Preventing Hospital Acquired Infections (HAIs)



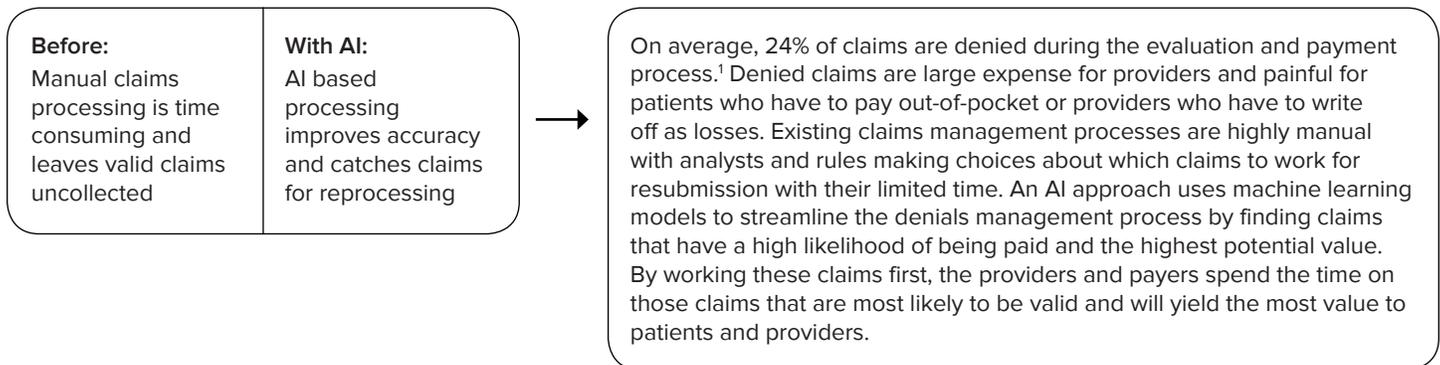
Improved Clinical Workflow



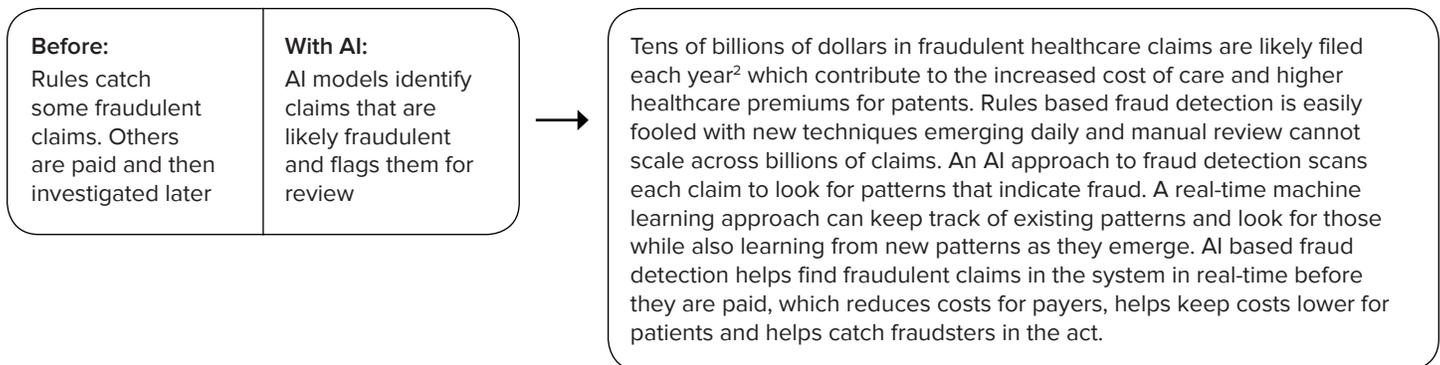
Predicting Readmissions



Claim Denials Management



Fraud Detection



Customer Case Study



Change Healthcare occupies a uniquely interconnected position at the center of healthcare, serving providers, payers, and consumers. As an independent healthcare IT company, they help process over 12 billion transactions annually covering 5,500 hospitals, 800,000 physicians, 130,000 dentists and 600 laboratories.

Change Healthcare helps provider organizations to process claims with payers. When a valid claim is denied by a payer for incorrect coding or other reasons it is a painful process for both the provider and patient. For those claims that should be paid, Change Healthcare helps the providers to reprocess the claims and collect the payment. Enhancing this process to find the claims that are most likely to be accepted and will yield the most value to the provider creates extensive value for Change Healthcare's clients.

Using H2O, the Change Healthcare team creates models to predict which claims are likely to be viable. This streamlines the claims management by making sure the analysts that are re-processing claims are working on those with the highest potential.

Challenges of Implementing an AI Strategy

The adoption of AI is not without its challenges. First, there is a critical shortage of AI talent. An expert data scientist is by far the most difficult and expensive position to fill. There are growing number of novice data scientists, but they lack the skills to create accurate models for mission critical applications in the healthcare industry. The second challenge is the time that takes to develop and deploy AI models. Streamlining the model development and deployment process is critical to ongoing success with AI applications. The final challenge is trust in AI. For a healthcare business to run on AI, key stakeholders must be able to understand how and why AI models make their decisions. This is critically important in healthcare where regulations require transparency into decision making processes.

Why H2O.ai for Healthcare

The mission at H2O.ai is to democratize AI for all so that more people across industries can use the power of AI to solve business and social challenges. The healthcare industry is a key focus for the company with an initiative to help develop AI healthcare solutions including dedicated, experienced resources for customers, driving healthcare AI events and meetups, and membership in Health IT Now.

H2O.ai is the trusted, open source leader in AI with its visionary machine learning platform, H2O, which is used by hundreds of thousands of data scientists in more than 14,000 companies, and with its leadership in the 2018 Gartner Magic Quadrant for Data Science and Machine Learning Platforms. H2O is already used to create and deploy production AI models at top healthcare companies including Change Healthcare, HCA, Aetna, Kaiser Permanente and more.

Continuing to democratize AI and solve new challenges, H2O.ai launched H2O Driverless AI, a new approach to automatic machine learning that solves the issues of data science talent, time to develop and deploy models, and developing trust in AI. Driverless AI extends the ability to develop trusted, production-ready AI models to many more users including data engineers, domain scientists and statisticians. With Driverless AI, these users can create and deploy models in hours, not weeks or months. H2O Driverless AI also includes key capabilities that are required for healthcare industry to create trusted AI models including best practice driven machine learning interpretability reports and reason codes to ensure regulatory compliance and trust.

Get Started Today

AI is critical to success in the healthcare industry. H2O.ai, the open source leader in AI, empowers healthcare companies to improve patient outcomes, drive more accurate diagnosis and decisions, and improve claims processes. Contact H2O.ai for more details and to schedule a meeting and/or demo at: sales@h2o.ai

Bibliography

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About H2O.ai

H2O.ai is the open source leader in AI. Its mission is to democratize AI for everyone. H2O.ai is transforming the use of AI with software with its category-creating visionary open source machine learning platform, H2O. More than 14,000 companies use open-source H2O in mission-critical use cases for Finance, Insurance, Healthcare, Retail, Telco, Sales, and Marketing. H2O Driverless AI, "Data Scientist in a Box", provides an easier, faster and effective means of implementing data science. In February 2018, Gartner named H2O.ai, as a Leader in the 2018 Magic Quadrant for Data Science and Machine Learning Platforms. H2O.ai partners with leading technology companies such as NVIDIA, IBM, AWS, Azure and Google and is proud of its growing customer base which includes Capital One, Progressive Insurance, Comcast, Walgreens and Kaiser Permanente. For more information and to learn more about how H2O.ai is transforming business with AI, visit: www.h2o.ai