

Artificial Intelligence in Healthcare



Healthcare organizations actively embrace automated machine learning as the next evolutionary step for healthcare analytics, driving better outcomes, patient satisfaction, and operational efficiency. These are the common use cases for artificial intelligence implemented by medical and research facilities.



1. IMPROVE SERVICE QUALITY

2. REDUCE COSTS

3. IMPROVE PATIENT OUTCOMES



Streamline Emergency Ward Triage

Precisely assess risks for every incoming patient to maximize quality of care and minimize costs. Minimize cases of undertriage and overtriage.

\$5,000

The estimated average cost of secondary overtriage, per patient per case.



Lower Length of Stay

Identify patients who are at risk of prolonged hospitalization and take necessary action to reduce the length of stay without sacrificing the quality of care.

5 DAYS

The average length of stay in US hospitals, and one of the two main factors negatively affecting hospital profitability, according to the Journal of Healthcare Finance.



Identify At-Risks Patients for Hospital-Acquired Conditions (HACs)

Predicting patients who are at risk of acquiring various HACs (sepsis, risk of falling, etc.) during their recovery can significantly improve clinical practices, profitability, and patient satisfaction.

\$88,747

The average unadjusted cost for patients with sepsis (3.6 times higher than for patients without it).



Improve Bed Occupancy Estimation

Accurate bed occupancy modeling (ICU, inpatient) can improve hospital resource and employee utilization, as well as drive better outcomes.

75%

Studies on the subject indicating that bed occupancy rates and related understaffing directly influence the incidence of hospital-acquired infections.



Improve Patient Billing Estimation

Correctly billing each patient is a complex healthcare management problem as it involves a multitude of factors. A precise billing estimation improves operational efficiency, cost-savings, and patient satisfaction.

UP TO 90%

Medical bills that contain errors.

\$1,300

Typical amount of erroneous charges on medical bills over \$10,000.



Refine Disease Propensity Models

Being able to accurately model disease propensity can significantly affect the outcomes through proper intervention and treatment personalization. Healthcare institutions can also use this information in marketing to target potential patients.

\$422.9 BILLION

Potential savings for the existing number of type 1 diabetic patients in the US alone, as a result of timely therapeutic intervention.



Generate No-Show Predictions

Identify patients who are likely to miss their appointment and take action (text, phone reminders) to increase their chances of showing up. This also allows hospitals to optimally stack appointments ("double up") to maximize revenue.

\$150 BILLION

The total annual cost of missed healthcare appointments in the United States.



Identify Avoidable Readmissions Early On

Building an accurate predictive model for readmissions can save hospitals millions of dollars, improve patient satisfaction, reduce litigation risks, and drive better outcomes.

\$17 BILLION

The annual cost of hospital readmissions that occur within 30 days of discharge for Medicare.



Improve Drug Deliveries to Patients

Automated machine learning can solve a variety of problems with drug delivery. From predicting drugs most likely to be ordered to predicting similar drug requests coming in within days of each other to facilitate order consolidation.

5.3%

Hospital inpatient medication error rates.



Patient Satisfaction Modeling

Predicting patient satisfaction and proactively resolving issues that have adversarial effects on it is a lucrative application of AI for hospitals.

81%

Percentage of consumers, who are unsatisfied with their healthcare experience.



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