

NJHFMA  
FACT Committee

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FACT Committee  
AI in Healthcare Business  
and Finance  
May 2025

## Agenda

- ✓ **Overview of AI in Healthcare**
  - ✓ Areas for Application
  - ✓ AI is Transforming Healthcare
  - ✓ Key AI Technologies
- ✓ **AI in Healthcare Finance**
  - ✓ Revenue Cycle Optimization
  - ✓ Patient Billing and Cost Transparency
  - ✓ Insurance Claims and Denial Management
  - ✓ Financial Planning and Forecasting
- ✓ **Summary of AI in Healthcare**

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- ✓ **Overview in Healthcare Business**
  - ✓ Areas for Application
    - ✓ Clinical Decision Support
    - ✓ Revenue Cycle Management
    - ✓ Administrative Automation
    - ✓ Population Health & Predictive Analytics
    - ✓ Personalized Medicine
    - ✓ Drug Discovery and Development
    - ✓ Supply Chain Management
    - ✓ Virtual Health & Remote Monitoring

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## ✓ **AI in Healthcare Finance**

### ✓ **AI is Transforming Healthcare**

- ✓ **Faster Revenue Recognition:** AI accelerates insurance approvals, coding accuracy, and collections.
- ✓ **Cost Reduction:** Automating repetitive tasks reduces administrative headcount and errors.
- ✓ **Patient Financial Engagement:** AI-powered estimates and self-service payment portals improve transparency and payment rates.
- ✓ **Improved Market Competitiveness:** Organizations offering AI-enabled virtual care, remote monitoring, or personalized engagement stand out.
- ✓ **Data Monetization:** Health systems are starting to leverage de-identified data for AI model training, opening new revenue streams.



## ✓ **AI in Healthcare Finance**

### ✓ **Key AI Technologies**

- ✓ Machine Learning (ML)
- ✓ Natural Language Processing (NLP)
- ✓ Computer Vision
- ✓ Generative AI (e.g., GPT models)

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## ✓ Polling Question #1

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# How is AI transforming healthcare!

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- ✓ **AI in Healthcare Finance**
  - ✓ **Revenue Cycle Optimization**
    - ✓ **Insurance Verification and Eligibility Checks**
      - ✓ AI automates real-time insurance eligibility verification at the time of scheduling or check-in.
      - ✓ Reduces claim denials due to coverage issues and minimizes front-end errors
    - ✓ **Automated Prior Authorizations**
      - ✓ Natural Language Processing (NLP) tools extract required clinical documentation and automatically submit prior authorization requests.
      - ✓ Decreases administrative delays and improves approval rates.
    - ✓ **Predictive Denials Management**
      - ✓ AI models predict the likelihood of claim denials before submission based on payer patterns, coding issues, or missing data.
      - ✓ Staff can proactively correct potential problems, improving clean claim rates.



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- ✓ **AI in Healthcare Finance**
  - ✓ **Revenue Cycle Optimization**
    - ✓ **Intelligent Appeals and Collections**
      - ✓ AI drafts customized appeal letters based on the denial reason, payer policies, and historical outcomes, expediting the appeals process.
      - ✓ Automated patient follow-ups using AI chatbots or messaging platforms increase payment rates while maintaining positive patient relations.
    - ✓ **Cash Flow Forecasting**
      - ✓ AI algorithms analyze historical billing data to predict cash inflows based on payer behavior, seasonality, and service mix.
      - ✓ Allows for better financial planning and liquidity management.
    - ✓ **Coding and Documentation Improvement**
      - ✓ AI-assisted coding tools automatically suggest the most appropriate CPT/ICD-10 codes based on clinical notes.
      - ✓ Reduces undercoding/overcoding risks and strengthens compliance.

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- ✓ **AI in Healthcare Finance**
  - ✓ **Patient Billing and Cost Transparency**
    - ✓ **Real-Time Cost Estimates at Point of Service**
      - ✓ AI tools integrate with payer databases to generate real-time out-of-pocket cost estimates based on insurance plan specifics, deductibles, and benefit structures.
      - ✓ Patients receive accurate pricing before services are rendered, improving financial preparedness and trust.
    - ✓ **Automated Bill Review and Error Detection**
      - ✓ AI platforms can analyze itemized bills to identify potential billing errors, such as duplicate charges, upcoding, or services not rendered.
      - ✓ This helps patients dispute erroneous charges and ensures providers maintain billing compliance.
    - ✓ **Personalized Payment Plans**
      - ✓ AI evaluates patient financial profiles (insurance, credit data, historical payment behavior) to proactively recommend custom payment plans.

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## ✓ Polling Question #2

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**Which of the following is not true about revenue cycle optimization?**

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- ✓ **AI in Healthcare Finance**

- ✓ **Patient Billing and Cost Transparency**

- ✓ **AI-Powered Patient Advocacy and Negotiation Tools**

- ✓ Consumer-facing AI apps help patients negotiate medical bills by comparing charges against FAIR Health data, Medicare rates, or commercial payer benchmarks.
      - ✓ Some tools even automatically generate negotiation letters or suggest when to request financial assistance.

- ✓ **Transparency in Bundled Pricing and Alternative Payment Models**

- ✓ AI is used to design and present bundled service pricing to patients (e.g., knee surgery package covering facility, surgeon, anesthesia, and rehab). Enhances clarity and promotes value-based care initiatives.

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- ✓ **AI in Healthcare Finance**
  - ✓ **Insurance Claims and Denial Management**
    - ✓ **Predictive Denial Analytics**
      - ✓ AI models analyze historical claims data to predict which claims are at high risk of denial — even before submission.
      - ✓ Risk factors (e.g., payer-specific rules, coding patterns, missing documentation) are flagged for correction in real time.
    - ✓ **Automated Appeals Generation**
      - ✓ For denied claims, AI engines automatically draft appeal letters, citing payer policy language, clinical evidence, and regulatory support.
      - ✓ Reduces human error, ensures faster resubmissions, and shortens appeal turnaround times significantly.
    - ✓ **Intelligent Claims Scrubbing and Pre-Submission Optimization**
      - ✓ AI reviews claims before submission to ensure proper coding, authorization verification, bundling logic, and modifier usage.

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## ✓ Polling Question #3

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**Which of the following is true about AI's impact on insurance claims and denials?**



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## ✓ **AI in Healthcare Finance**

### ✓ **Financial Planning and Forecasting**

#### ✓ **Predictive Revenue Forecasting**

- ✓ AI models analyze historical billing, payer mix, patient volumes, and market data to predict future revenue with high accuracy.
- ✓ Factors like payer reimbursement trends, coding changes, and demographic shifts are automatically incorporated.
- ✓ Allows finance teams to create scenario-based forecasts (best, base, worst-case projections).

#### ✓ **Volume and Utilization Predictions**

- ✓ Machine learning predicts future patient volumes based on seasonality, epidemiological data (e.g., flu seasons, COVID-19 trends), and local demographics.
- ✓ Forecasts help organizations plan staffing, supplies, and capital investments more accurately.

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- ✓ **AI in Healthcare Finance**
  - ✓ **Financial Planning and Forecasting**
    - ✓ Real-Time Cost Modeling
      - ✓ AI continuously monitors variable and fixed costs (e.g., labor, supplies, facilities) and projects their impact on margins.
      - ✓ Provides real-time visibility into how operational decisions (like staffing changes or supply costs) affect financial budgets.
    - ✓ Cash Flow Forecasting and Liquidity Management
      - ✓ AI analyzes claims processing times, denial rates, and patient payment trends to predict cash inflows and outflows.
      - ✓ Finance leaders get early warnings about potential cash shortfalls or liquidity risks impact financial outcomes.

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- ✓ **AI in Healthcare Finance**
  - ✓ **Financial Planning and Forecasting**
    - ✓ Investment Planning and Capital Allocation
      - ✓ AI helps prioritize capital investments (new service lines, facility expansions, technology upgrades) by projecting ROI based on predictive financial scenarios.
      - ✓ Risk-adjusted forecasts improve decision-making around major expenditures.
  - ✓ External Market and Competitive Intelligence
    - ✓ AI tools scrape public financial reports, regulatory updates, and competitor activities to predict external pressures (e.g., rate negotiations, payer consolidations, legislative changes). Organizations adjust financial plans based on market-leading indicators, not just internal metrics.

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- ✓ **Summary of AI in Healthcare**
  - ✓ **Healthcare Business**
    - ✓ Application Areas
    - ✓ Transforming Healthcare
    - ✓ Various AI Technologies
  - ✓ **Healthcare Finance**
    - ✓ Revenue Cycle
    - ✓ Patient Billing
    - ✓ Insurance Claims
    - ✓ Financial Planning
  - ✓ **AI – Developing Technology**

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## ✓ Polling Question #4

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**Which of the following is not true about AI's impact on financial planning and forecasting?**

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