

The Future of the Healthcare Revenue Cycle



Speaker



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Course Objectives

Understand how technology-driven innovations in the healthcare revenue cycle have the potential to **enhance efficiency, accuracy, security, and financial outcomes** while benefiting patients and healthcare providers.

Discover best practices to integrate AI and other healthcare technologies into your workflow.

Leverage technology to streamline revenue cycle tasks and improve coding, billing, payment processing, and claims management.

Agenda

1. Revenue Cycle: History & Current State
2. The Role of Emerging Technology
 - Artificial Intelligence
 - Understanding Blockchain
 - The Power of Predictive Analytics
3. Practical Next Steps and How-To Advice

Where We Are and Where We've Been



History of Technology & Revenue Cycle Functions



Traditional Revenue Cycle

- Manual Processes
- Paper-based Systems



Early Digitalization

- Electronic Health Records
- Billing Software



Current Tech Advancements

- AI
- Blockchain
- Predictive Analytics

Current State of the Revenue Cycle



Covers admin and patient-facing processes from the appointment to when final bill paid



Increasingly complex, with more stakeholders and systems



Faces many challenges

- Inefficiencies
- Specialization
- Billing & Claim Management
- Delayed & Incomplete Payments

Leveraging Technology in the Revenue Cycle



Differentiating Among Emerging Technologies

Platforms

Automation/RPA

Machine-driven execution of processes (often UI-based)

Blockchain

Secure transaction management platform

Performers

Natural Language Processing (NLP)

AI-adjacent capability for machines to understand conversational inputs

Machine Learning (ML)

Determination and application of segmented types and outcomes to better analyze data sets

Artificial Intelligence (AI)

Synthesis of data to enable machine-driven decision making

Predictive Analytics

Using data analyses to predict outcomes based on prior observations

Critical Principles

1

**Thoughtful
integration
design**

2

**Clear,
well-defined
underlying
processes**

3

**Balance of
technology and
human elements**

Leveraging Technology In the Revenue Cycle



AI

Coding
Billing
Claims



Blockchain

Security
&
Transparency



Predictive Analytics

Trend
Identification &
Issue Resolution

Artificial Intelligence



⚡ GPT-3.5

⚡ GPT-4

ChatGPT



Examples

"Explain quantum computing in simple terms" →

"Got any creative ideas for a 10 year old's birthday?" →

"How do I make an HTTP request in Javascript?" →



Capabilities

Remembers what user said earlier in the conversation

Allows user to provide follow-up corrections

Trained to decline inappropriate requests



Limitations

May occasionally generate incorrect information

May occasionally produce harmful instructions or biased content

Limited knowledge of world and events after 2021

Send a message



Free Research Preview. ChatGPT may produce inaccurate information about people, places, or facts. [ChatGPT July 20 Version](#)



1. **AI is not an “Easy Button”** to solve all inefficiencies and problems
2. Key capability is the **ability to synthesize large and complex data sets**
3. Coupled with NLP, it **offers a platform for technological innovation** across a number of fields
4. AI, as with most tools, remains an **enhancement to human abilities**

Benefits of AI in the Revenue Cycle

1

**Primary use
in discrete and
data-heavy
functions**

(e.g., coding, billing and
claims management)

2

**Emerging uses
across synthesis-
driven functions**

(e.g., complex coding,
denial management)

3

**Provides
Efficiency,
Accuracy and
expanded
Automation
capabilities**

Keep Top of Mind



Current Capabilities

- Automation
- Predictive modeling
- Increased efficiency



Limitations

- Dependence on Quality Data
- Cost
- Regulatory Issues



Future Developments

- Enhanced Accuracy
- Increased Integration & Interoperability
- Advanced Predictive Analytics

Understanding Blockchain



What Is It? How Does It Work?



- ✓ **Distributed Ledger / Decentralized Database**
- ✓ **Highly Secure and Transparent**
- ✓ **Reduces Possibility of Fraud**

Potential Benefits for the Revenue Cycle

**Secure and
Transparent
Billing System**

**Secure Patient
Data-Sharing**

**Improved
Coordination
of Care**

**Greater Accuracy
of Coding**

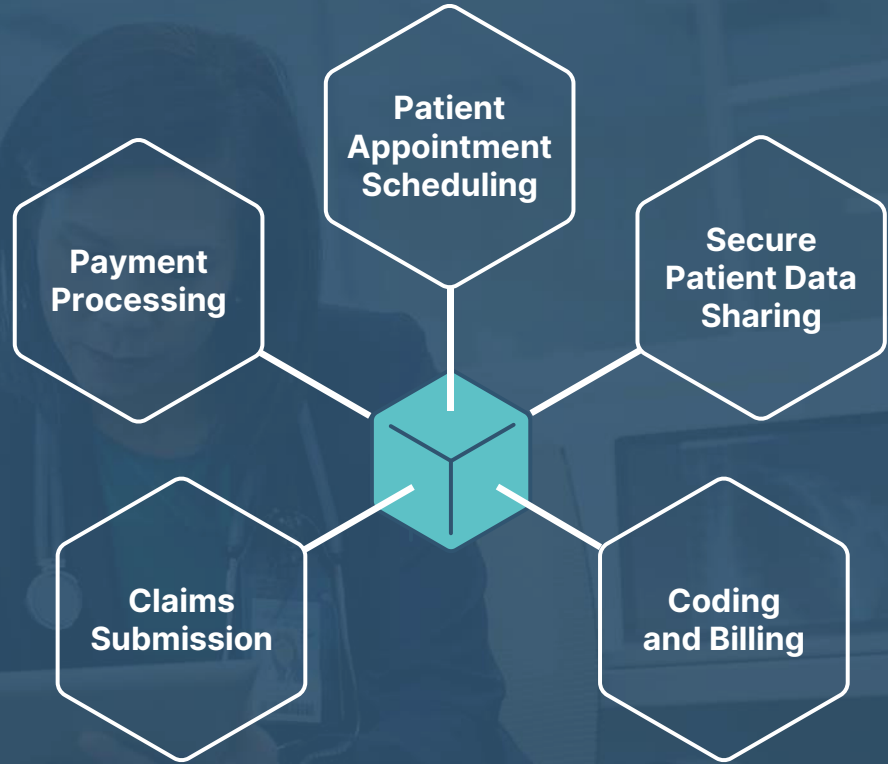
**Ability to Trace
Transactions**

**Overall Improved
Efficiency**

Example of a Blockchain-Enhanced Revenue Cycle

securely recorded

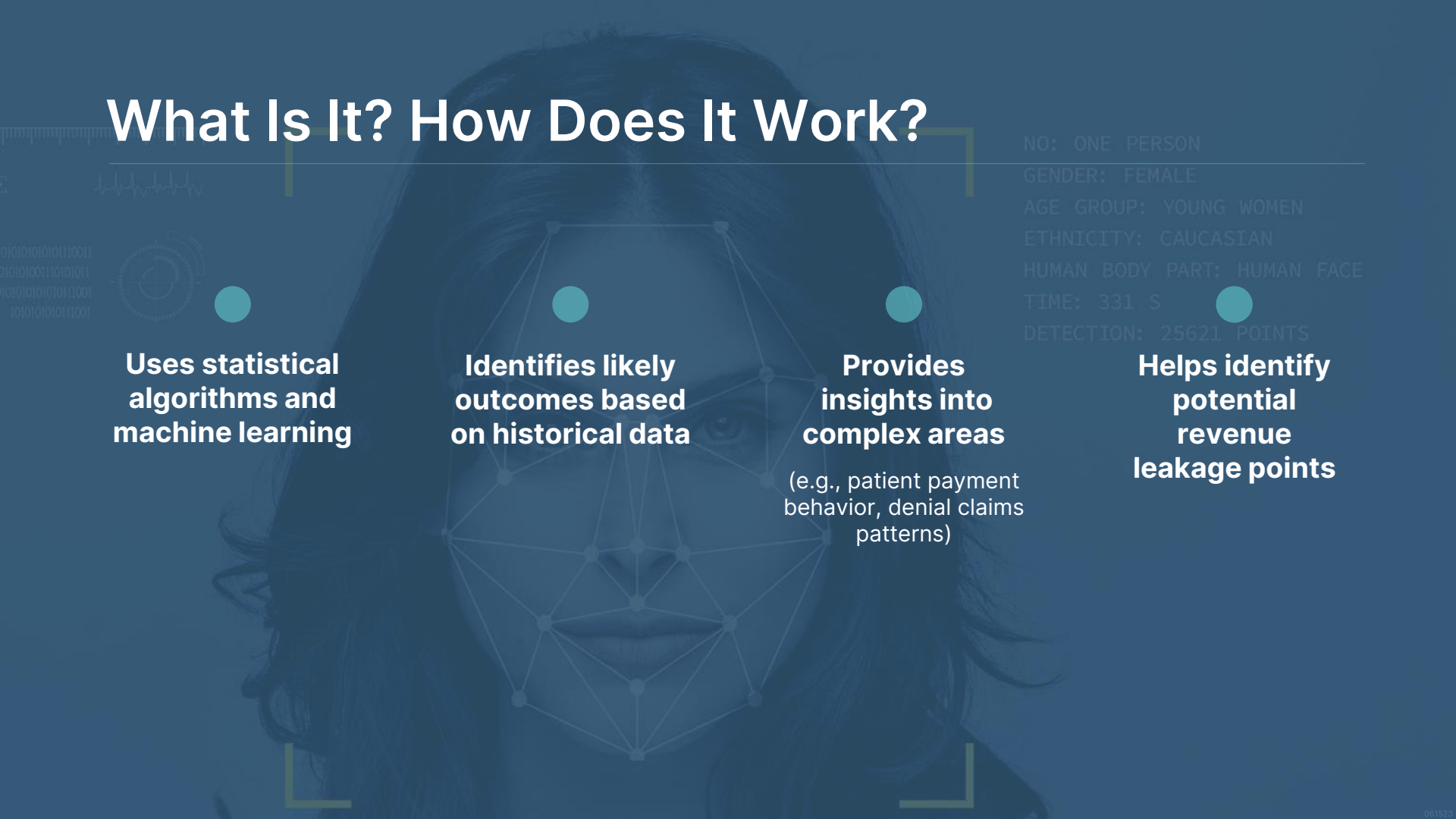
- ✓ Every stakeholder has access to reliable, transparent data
- ✓ Fewer disputes
- ✓ Increased efficiency and a better patient experience



The Power of Predictive Analytics



What Is It? How Does It Work?



Uses statistical algorithms and machine learning

Identifies likely outcomes based on historical data

Provides insights into complex areas

(e.g., patient payment behavior, denial claims patterns)

Helps identify potential revenue leakage points

NO: ONE PERSON
GENDER: FEMALE
AGE GROUP: YOUNG WOMEN
ETHNICITY: CAUCASIAN
HUMAN BODY PART: HUMAN FACE
TIME: 331 S
DETECTION: 25621 POINTS

Use Cases of Predictive Analytics Mind

Risk Stratification for High-Cost Claims

- Identify patients likely to generate high-cost claims
- Providers manage these patients to reduce costly hospital admissions or readmissions

Prediction of Claims Denials

- Analyze historical data to identify patterns
- Indicate issues such as coding issues or missing documentation
- Reduce future denials

Estimation of Patient Ability to Pay

- Analyze socio-economic data
- Inform discussions on payment plans or charity care
- Reduce bad-debt write off

Synergy: AI and Predictive Analytics



**AI for
Automation &
Efficiency**



**Predictive
Analytics for
Foresight &
Decision Making**



**Intelligent
Prediction &
Automation**

Synergy: AI and Predictive Analytics



When **AI and predictive analytics** work together, we get a system that's not just efficient, but also **INTELLIGENT.**

Example: Integrating AI and Predictive Analytics in Claims Management

- ✓ More efficient
- ✓ Adaptive
- ✓ Improvement across revenue cycle

Review &
Feedback
Loop

Claims
Creation

Risk
Assessment

AI
+
Predictive
Analytics

Automated
Handling

Risk Points In Transitioning to Advanced Technologies

**Data Security
& Privacy**

**Integration &
Interoperability
Issues**

**Workforce
Training &
Adoption**

Cost & ROI

**Patient
Trust &
Acceptance**

**Provider
Resistance to
Change**

**Over-reliance
on Technology**

**Potential
Impact on
Employment**

The Future of the Revenue Cycle

- ✓ **Future looks promising**
- ✓ **Will improve patient care**
- ✓ **Administrative tasks streamlined**
- ✓ **Resources optimally used**
- ✓ **Focus is rightfully on the patient**

Questions

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Thank You



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