Harness AI and Evidence-Based Care Guidelines to Optimize UM and Mitigate Denials

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Speaker

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Disclaimer

I have no real or perceived conflicts of interest that relate to this presentation

Session Abstract

- This session explores how artificial intelligence (AI) can enhance medical necessity documentation and protect revenue by extracting insights from electronic health record (EHR) data
- Attendees will learn strategies to improve observation rates, mitigate denials, shorten review times, and decrease the administrative burden, enhancing overall healthcare operational effectiveness

Objectives

By the end of this session, attendees will be able to:

- **Describe** the importance of timely and accurate documentation in healthcare and its role in resource utilization and denial mitigation
- **List strategies** for improving observation to inpatient conversion rates, avoiding or overturning medical necessity denials, and reducing chart review time
- **Understand** the key factors that influence AI adoption and the measurable KPIs
- **Prepare** to ask the right questions when evaluating AI for your hospital system
- **Formulate** a roadmap for evaluating AI outcomes and identifying continuous improvement opportunities

Current Challenges & Opportunities

- UM teams reduced FTEs to complete high-volume workloads
  - Increased risk of human error
  - Relies on user calculations
  - Pressures to complete reviews quickly impact the ability to effectively review and document clinical data supporting the medical necessity review

Current Challenges & Opportunities

- Reviewers rely on EHR worklists that are based on insurance, admit date, location, or alphabetical
  - Multiple reports/worklists from the EHR
  - Report is good for time run/printed
- UM leadership has minimal transparency on review status and associate workloads

Why Artificial Intelligence?

- The age of data wealth
- From the MCG Blog:
  "Collecting data is no longer a primary challenge. The biggest challenge is to surface the right information, to the right people at the right time, with the right intervention, in the right channels, and during the right moment in the appropriate clinical flow."[14]
- Data **doesn't** equate to information or knowledge

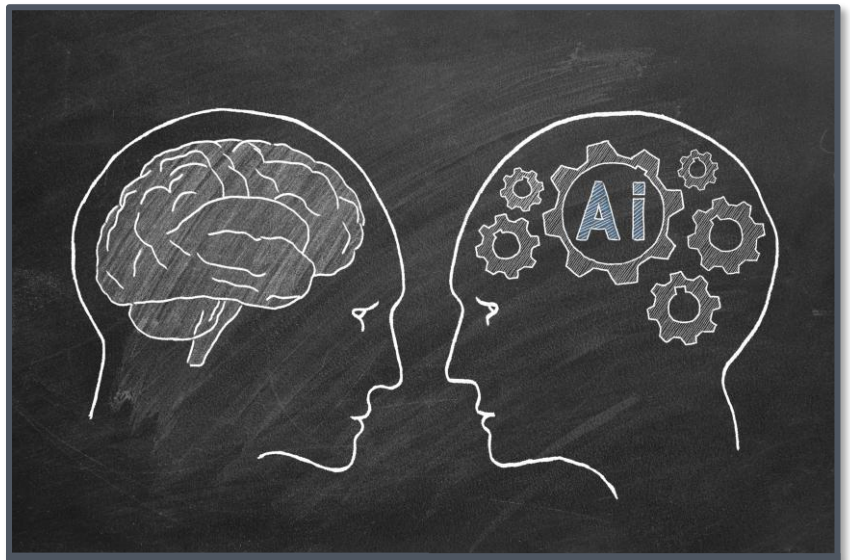
Defining Artificial Intelligence

"What is AI?": 9,160,000,000 results (in 0.31 seconds)

- “Artificial intelligence is an interdisciplinary field that leverages mathematics and statistics, cognitive science, and computing to enable problem-solving based on vast and robust datasets with high-performance computers.”[2]
- “Artificial intelligence is the ability for computers to imitate cognitive human functions such as learning and problem-solving”[3]
- “It’s the capability of a computer system to mimic human-like cognitive functions such as learning and problem-solving”[4]
- “The term ‘artificial intelligence’ means a machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations or decisions influencing real or virtual environments”[5]
- “AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity." [6]

AI: Then and Now

- AI is the broad concept of machines mimicking human intelligence....
- 1950: Birth of AI concepts by Alan Turing
- 1980s: Machine learning – the computer can “learn” from data & patterns rather than manual code
- Massive data sets in the 2010s facilitated deep learning – uses artificial neural networks – relies on billions of examples
- Generative AI, the capacity to create new content based on learned data patterns, explodes in the 2020s with ChatGPT, Bard, Gemini



The Core Goal of Artificial Intelligence

Create systems capable of performing tasks that would typically require human intelligence, such as understanding natural language, recognizing patterns, solving problems, and learning from experience

Imaging is thought of as the best medical use case of AI

Artificial Intelligence in Healthcare

Use cases

- Public health monitoring, fraud detection, medication adverse effects, and monitoring medical practice[19]
- Diagnosis improvement in fractures[11]
- Identifying polyps during routine colonoscopies[17]
- Risk identification resulting in statin therapy initiation and lowering LDL (low-density lipoprotein)[7]

Artificial Intelligence in Healthcare

Use cases

- Used in research identifying patterns of care and opportunities for improvement in case management[13]
- Applications using machine learning that supports caregivers as they understand, navigate, and access resources[21]
- Natural language processing (NLP) to understand unstructured clinical notes in the EHR to predict 30-day hospital readmissions[2,8]
- Future potential for the use of “chat bots” in healthcare education[6]
- Agentic AI for patient interviews while surveilling for gaps in care

AI in Utilization Management

Use cases

- **Prior Authorization:** AI systems can assist in speeding up the prior authorization process by automatically gathering patient information and matching it against clinical criteria to authorize necessary procedures or medications
- **Automation of Claims Review:** AI tools streamline the claims review process by automatically checking for anomalies, coding mistakes, and discrepancies, which can then be flagged for human review

AI in Utilization Management

Use cases

- **Clinical Decision Support:** AI algorithms provide clinicians and UR teams with evidence-based guidelines and recommendations to help determine the most appropriate levels of care
- **Treatment Outcome Analysis:** AI can analyze the outcomes of different treatments, enabling healthcare providers to understand which interventions are most effective for certain conditions

Navigating Safely

- Key areas of focus
  - Explainability/ability to validate the AI recommendation
  - Evidence-based foundation
  - Clinical judgment intervention
  - Guiding principles/focus
  - Workflow incorporation
  - Fairness

Imagine the Potential of AI in UM

- **Prioritizing patient load based on UM impact**
- **Supporting medical necessity documentation by:**
  - Scanning through notes and identifying keywords or phrases
  - Identifying key labs, vitals, problems/conditions
  - Analyzing trends of data from previous visits and providing baselines
  - Pulling in data points from the patient's chart to present objective markers of the patient status
- **Appeal letter generation for medical necessity denials**

Imagine the Potential of AI in UM

- **Reducing administrative burden**
  - Documenting and sending your UM review via your EHR directly to the payer
  - Directly responding to the provider with authorization or requests for additional information
  - Staying in your workflow to review, document, communicate, execute process and obtain results
- **Efficiency creation**

AI in Action: Utilization Management Real Life Use Case

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Bringing Focus to Workload Priorities

AI in action

- Identification of conversions and avoidance of unnecessary denials to protect revenue integrity
- Clinical prioritization of worklist
- OBS and INPT in one list
- Continuously updated using EHR feeds
- Oversight of staff reviews
- Chart notifications to notify staff of updates to relevant EHR documentation

Improving Review Accuracy

AI in action

- Decrease the amount of time searching through the EHR
- Surface data known about the patient side-by-side of unbiased, evidence-based care guidelines
- Assists and automates clinical review process
- Mitigate unnecessary inpatient stay denials through robust documentation supporting the medical necessity
- Embedded EHR experience and documentation

Optimizing the Clinicians' Experience

Maximize adoption

Internal

- ✓ Understand IT & contracting requirements
- ✓ Request internal IT project manager and key EHR vendor stakeholders – don't take NO for an answer!
- ✓ Be a super user – know the product inside and out
- ✓ Change management

Technology Partner Collaboration

- ✓ Weekly meetings – don't delay on deliverables
- ✓ Provide honest and complete feedback on function, features, issues
- ✓ Allow end users to meet virtually with developers
- ✓ Test all scenarios of admissions

Outcomes and Results

- Operational improvements identified around update of principal problem in Epic
  - Case managers working with hospitalists to ensure accurate principal problem
  - UM RNs are working with physicians to update principal problem in Epic which improves the downstream workflow of the diagnosis into their AI-prioritized worklist

Outcomes and Results

- Cultural shift
  - **Accountability**: UM staff accountable by monitoring individual performance on a dashboard
  - **Assertiveness**: empowered the UM team to be more assertive but courteous and to take charge of the hospital processes they own as the UM guidelines experts in the organization and the providers defer to their expertise and experience

Outcomes and Results

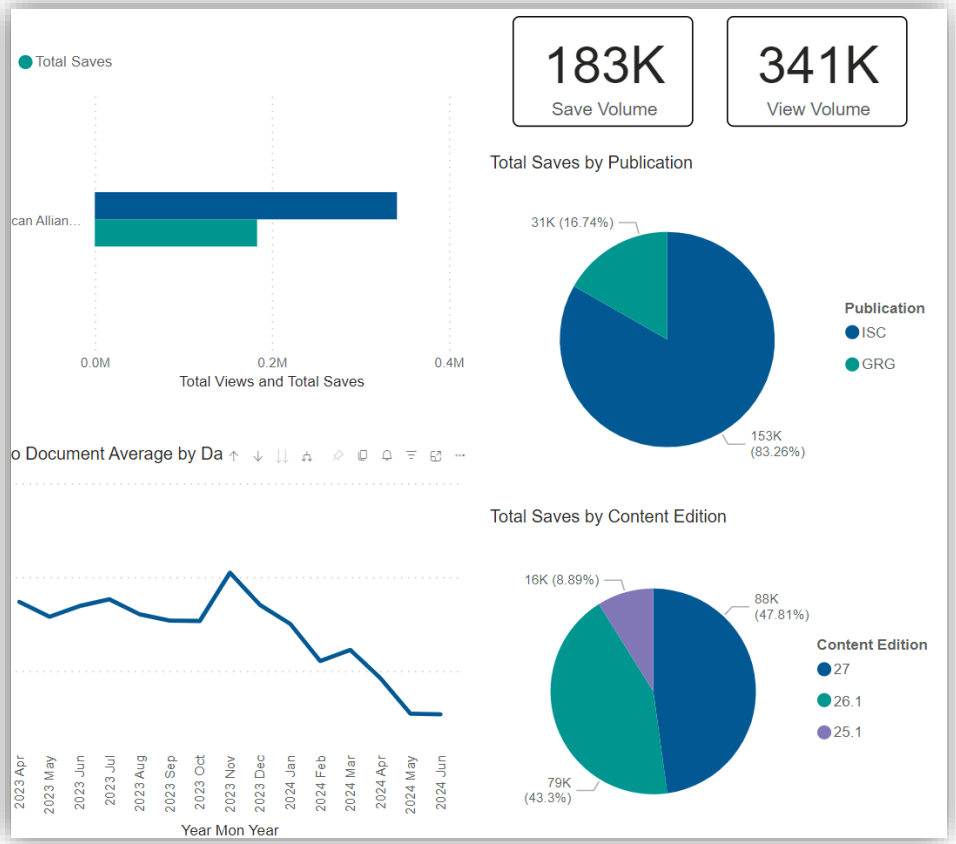
- OBS rate decreasing monthly since implementation of AI tools
  - **Increased conversion from OBS to IP**
  - ***No increase*** **in denial rates**, confirming that payers are seeing the documentation of evidence in the EHR needed for approval

Outcomes: Operational Efficiency Impact

Views vs. saves:
Showcases the expanded use of MCG Solutions on inpatient conversions and denial reviews

Accelerate processes:
Initial review time reduced from 15 minutes to just 3 minutes by optimizing workflows, thereby enhancing reviewer efficiency and capacity

Harness the power of data
Team is empowered with intelligent assistance, ensuring at least 50% of reviews are satisfied with Synapse data matching

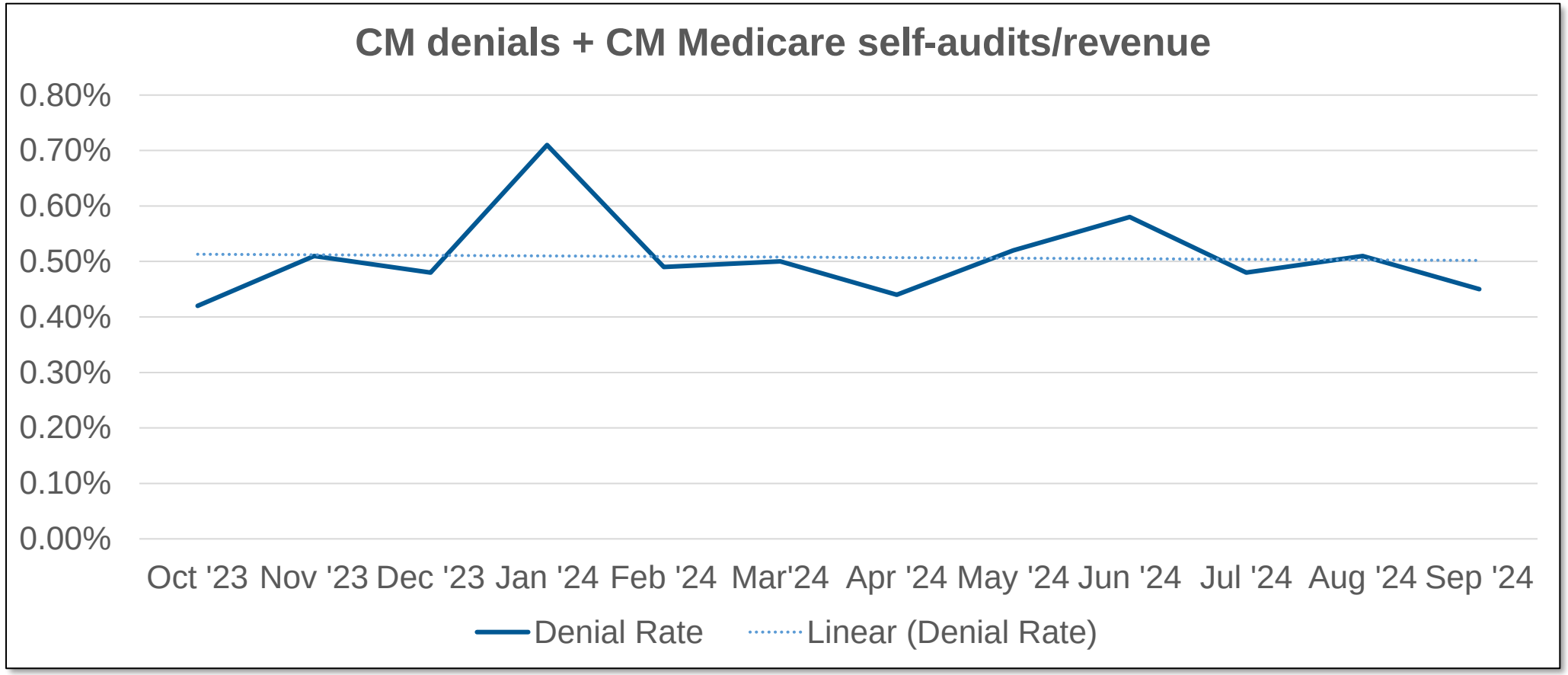


Outcomes: Financial Impact

Observation ROI for MCG Solutions		
Average admissions (inpatient & observation)	*10,000*	
Baseline OBS rate – October 2023	*25%*	
Current observation (OBS) rate – October 2024	*18%*	
Reduction in OBS rate	*-7%*	
OBS count with baseline rate of 25%	*2,500*	
OBS count with current rate of 18%	*1,800*	
OBS count reduction & converted to inpatient	*700*	
Difference in net revenue (INPT vs. OBS)		*$5,000*
Revenue for OBS reduction		****$ 3,500,000***
Revenue for OBS reduction (annualized)		****$ 42,000,000***

Reduce admission volume to 1,000-2,000 (for a 500-bed hospital)
***Revenues listed as estimates**

Outcomes: Denials Impact



Continuous Improvement Process

Educate and incentivize hospitalists:

- Physician advisors will pick random charts, educate *"add this one line … the tool will pick it up and we'll get that conversion!"*
- Achieved the goal of reduction in OBS rate from 25% → 18%

Policy change on status change:

- UR nurses convert the patient from OBS to IP
- Route to the hospitalist to sign the order

Continuous Improvement Process

24/7 team reviewing admissions:

- Looks at slam dunks – use secure chat to convert

Throughput rounds:

- Who's going to be discharged, DON'T convert

OBS virtual rounds:

- Led by physician advisor on Teams

The next opportunity:
"Soft admission" reduction – moving patients to a lower level of care (home, homecare, SNF, etc.) in lieu of admission

Key Takeaways

- Machine learning and AI solutions are plentiful, requiring careful thorough vetting
- Leveraging patient data and AI in the context of unbiased evidence-based guidelines ensure alignment with payers
- Explainability in AI is key in achieving defensible medical necessity documentation
- Continuously seek opportunities to improve your processes as you bring in AI solutions

Q & A

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Thank You

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