Redefining Utilization Management: The Role of AI

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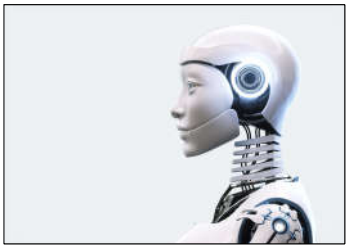
Objectives

I. Identify and define various artificial intelligence (AI) technologies currently available
II. Unveil the power of AI in utilization management by looking at the specific applications, and how they can enhance efficiency and effectiveness
III. Navigate the AI landscape safely by highlighting potential risks and pitfalls associated with the use of AI in utilization management, and provide guidance on how to avoid these issues for a smooth and successful implementation

Why Artificial Intelligence?

- The age of data wealth
- Data doesn't equate to information or knowledge
- From the MCG Health 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."

What is Artificial Intelligence?



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]

The Core 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

Artificial Intelligence

AI in Healthcare

- 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]
- Used in research identifying patterns of care and opportunities for improvement in case management[13]

AI in Healthcare

- 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 artificial intelligence in healthcare education[6]

AI in Utilization Management

- **Machine Learning**: A type of AI that uses algorithms, rules and data analysis to make data-driven recommendations
- **Natural Language Processing (NLP)**: The branch of AI focused on giving computers the ability to understand text and spoken words in the same way human beings can by extracting symptoms, diagnosis and treatments from narrative text
- **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

AI in Utilization Management

- **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
- **Clinical Decision Support**: AI algorithms provide clinicians and Utilization Review (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

Imagine the Potential of AI in UM

- Supporting your medical necessity documentation by:
  - Scanning through notes and identifying keywords or phrases
  - Drawing your clinical eye to key labs, vitals, problems
  - 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
- Prioritizing your patient load based on UM impact

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

Principle 4

- Board-certified case managers (CCMs) will act with integrity and fidelity with clients and others
  - Integrity
  - Fidelity
- Applying integrity and fidelity to artificial Intelligence

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Navigating Safely

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

Navigating Safely

Take the time to learn and understand how the AI recommendation is being made

Navigating Safely



What if AI Could…

- Support our UM role in the same way it supports our daily lives with recommendations, times, alerts, etc.
- Have seamless integration into our healthcare roles
- Create efficiency and save time

Questions?

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For More Information

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Thank You

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