The Clinical Impact of Agentic AI in Enterprise Imaging

STRINGS

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Artificial intelligence (AI) has become increasingly embedded in clinical imaging, with specialized ("narrow AI") tools supporting tasks such as detecting intracranial bleeds, measuring lung nodules, and summarizing and codifying clinical documentation. While these tools enhance diagnostic capabilities, their growing number introduces complexity into clinical workflows.

Clinicians are often required to manually interpret imaging orders, review patient context, and determine which studies, or portions of studies, should be sent to specific AI algorithms or post-processing applications. These fragmented "micro-workflows" can introduce delays, increase cognitive burden, and create opportunities for error.

Agentic AI represents a shift from task-specific tools to systems that understand clinical context and act autonomously. Rather than waiting for user input or prompts, Agentic AI can proactively interpret clinical intent from imaging orders, encounter notes, and EHR data, and then initiate appropriate actions within the workflow.

Intelligent Workflow Orchestration at the Point-of-Care

From a clinical perspective, Agentic AI improves workflow efficiency by automating the orchestration of imaging data across disparate systems. In acute stroke or trauma cases, where every second counts, Agentic AI removes traditional bottlenecks by automatically:

- **Interpreting Clinical Intent:** Analyzing both structured and unstructured patient data (e.g. clinical notes) to understand the urgency and specific diagnostic needs without manual flagging. **Precise Data Routing:** Directing
- the appropriate imaging series to the correct AI or tools while ensuring all data is accurately attached to the correct patient record.
  Intelligent Result Integration: Routing AI algorithm results back to the point
- of care without manual intervention.
  Prioritized Presentation: Ensuring results are automatically integrated into
- the report and presented to the interpreting radiologist in a format that reflects the priority and criticality of the findings, allowing for immediate action on life-threatening cases.

By eliminating manual data handling and triaging, Agentic AI significantly reduces delays in diagnosis and supports faster clinical decision-making when every second counts.

Reducing Clinical Distraction & Cognitive Load

Many clinical workflows are hindered by repetitive, non-clinical tasks that fragment a clinician's day. Collecting point-of-care imaging, whether through Point-of-Care Ultrasound (POCUS), mobile apps, or non-DICOM capture tools, traditionally requires a series of manual steps: searching for the patient, capturing the image, entering metadata (body part, laterality, indication), and triggering the "send" to storage.

For a clinician performing dozens of exams per shift, this cumulative tax is not just a loss of time - it is a repeated break in clinical focus. Agentic AI acts as an invisible assistant that:

- Ensures Data Integrity: Automatically associates image objects with the correct patient and encounter metadata, eliminating typos or omitted documentation.
- Automates Routing: Seamlessly directs data to the VNA for storage and the EHR for viewing.
- Enhances Retrieval: Organizes information so it is easily discoverable, moving "beyond the blob" to a structured, longitudinal clinical history.

This returns thousands of hours of effort to the clinical team, ensuring data is organized and accessible exactly when and where it's needed.

Case Example: At Advocate-Aurora Health, Strings eliminated more than **467 hours per month** of physician and nurse time by autonomously searching patient details and syncing metadata to reduce manual steps and eliminate "swivel chair" workflows between EHR and EpicCare mobile apps.

Enabling Scalable Clinical AI Adoption

For many clinicians, the promise of AI is overshadowed by the "integration gap" - the effort required to ensure the right study reaches the right algorithm. Agentic AI closes this gap, serving as an orchestration layer that manages diverse AI ecosystems so you don't have to.

- **Orchestration Guided by Intent:** It creates a cohesive workflow that understands the "why" behind an order. It automatically directs imaging to the appropriate specialized algorithms—whether for stroke, trauma, or routine screening, without a single manual click.
- **Innovation Without Friction:** As your organization adopts new, best-of-breed AI tools, the workflow remains consistent. You gain the diagnostic edge of an advanced AI ecosystem while remaining focused on the patient, confident that the data is being moved, analyzed, and delivered with clinical precision.

Bringing the Focus Back to the Patient

The future of medical imaging is not defined by the number of apps or AI algorithms an organization owns, but by how effectively those tools are woven into the fabric of care.

Agentic AI represents the end of the "integration tax" - the manual searching, tagging, and routing that has long fragmented the clinician's day.

By transforming these disjointed micro-workflows into a single, cohesive, and intent-aware system, Agentic AI does more than just move data. It ensures that critical findings find the physician, that point-of-care images are never "lost in the blob," and that the most urgent cases are automatically elevated to the top of the list.

Ultimately, Agentic AI restores the clinician's primary role: moving past the administrative friction of the screen to focus entirely on the person under care.

About 3DR Labs

3DR Labs transforms healthcare operations through a unified ecosystem of advanced medical imaging and intelligent automation. By integrating expert radiologic clinical services with a vendor-agnostic AI gateway and predictive workflow orchestration, 3DR harmonizes complex imaging and workflow analysis with human expertise. This end-to-end innovation empowers providers to augment clinical expertise, automate workflows, and accelerate diagnostic interpretation. The result is a more efficient imaging enterprise that optimizes performance and reduces costs—ultimately driving faster, more efficient care delivery and improved patient outcomes across the entire continuum of care.

1-502-569-1025

info@3drlabs.com

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Agentic Intelligence for Enterprise Optimization