

## Realising ROI in Healthcare AI: Bridging Hype and Reality



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The potential of artificial intelligence (AI) in healthcare is undeniable. From improving the quality of care to enhancing operational efficiency, AI promises transformative benefits. However, turning these promises into tangible financial returns remains an elusive goal for many healthcare organisations. Despite expectations for AI to deliver a positive return on investment (ROI), many challenges still stand in the way, and achieving a positive financial return may be harder than anticipated.

### AI's Potential Benefits and Costs

Healthcare organisations hope AI will revolutionise their operations. AI can enhance patient outcomes, streamline workflows, and boost research efforts. For instance, automating administrative tasks like billing and scheduling can cut costs by reducing staffing needs while improving supply chain efficiency and preventing waste. AI also has the potential to increase revenue through strategies like improved risk adjustment, better service-level coding, and enhanced revenue cycle management.

However, AI implementation has its costs. The initial investment in evaluating, purchasing, and integrating AI technologies is substantial. Moreover, these technologies require ongoing software, maintenance, and infrastructure expenses. Organisations must also account for "switchover costs"—the temporary drop in productivity that often accompanies the introduction of new technologies. The complexities of AI adoption, including opportunity costs and reputational risks, add another layer of financial burden.

### Why Analysing AI's ROI is So Difficult

One of the primary challenges in demonstrating AI's ROI in healthcare is translating abstract benefits like quality, efficiency, and productivity into quantifiable financial returns. Assessing ROI depends heavily on perspective. For instance, hospital administrators might see AI as a cost-saving tool that reduces staffing needs, while clinicians may feel burdened by additional work imposed by the new technology.

Another factor complicating ROI analysis is the discrepancy between those who make purchasing decisions and those affected by AI. C-suite executives may push for tools that increase risk coding and boost revenue, but front-line physicians may resist these changes if they add to their workload. Additionally, healthcare's traditional fee-for-service payment models may disincentivise AI adoption, as insurers rarely reimburse AI tools, limiting the financial benefits for providers.

The time horizon is also critical in assessing AI's financial impact. Historically, technology adoption in healthcare has initially focused on making existing processes more efficient rather than transforming care delivery. The full benefits of AI may not materialise for years as organisations struggle to move beyond simply speeding up old ways of working to truly reimagining workflows.

### Why Achieving a Positive ROI May Be Elusive

Given the high expectations for AI in healthcare, it may be unrealistic to expect rapid or substantial returns on investment. Many AI tools, particularly generative AI models, remain unreliable and prone to errors, making them unsuitable for high-value tasks. Most healthcare organisations deploy AI for routine tasks like documentation, prior authorisations, or patient messaging. However, paradoxically, AI may complicate rather than simplify these activities. For instance, clinicians using AI tools to respond to patient messages have sometimes spent more time on these tasks, undermining productivity gains.

Even when AI saves time, it doesn't always translate into greater efficiency. The reality is that time saved by AI might not be reallocated to patient care, as evidenced by surveys where clinicians reported not using extra time to see more patients. Furthermore, AI's benefits are contingent on resolving downstream bottlenecks. For example, automating patient scheduling won't increase access if doctors' schedules are already full.

Financial reimbursement models further complicate ROI. Most AI tools do not directly increase the volume of billable services, making it hard for

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organisations with thin operating margins to break even. AI tools that improve documentation, predict patient deterioration or identify medical conditions may not generate enough additional revenue to cover their costs.

AI in healthcare offers vast potential, but realising a positive financial return is not guaranteed. AI's complexity, costs, and uncertain productivity gains make its ROI elusive. While AI can transform care delivery in the long run, today's AI tools are often best suited for back-office operations like revenue cycle management. As healthcare organisations become more familiar with AI, they may need to focus on incremental gains rather than expecting revolutionary financial returns. Though AI is unlikely to deliver a "free lunch," its careful and strategic implementation may yield valuable, albeit modest, economic benefits.

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