Article

Using AI to Predict Launch Success

How to maximize market-entry performance for new pharma products in an increasingly competitive launch environment

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Product launches face unprecedented complexity in today's pharmaceutical landscape. The rise of specialty medications, increasingly intricate patient journeys, constraints on healthcare systems, evolving engagement models, and heightened evidence requirements have fundamentally changed how successful launches must be executed. Compounding these challenges is the fact that more products are competing for the attention of the same patient populations with the heightened need of managing multiple stakeholders and Healthcare Professionals (HCPs). Plus, asset lifecycles continue to shorten.

The result? A pressing need to optimize pharmaceutical launches with greater precision than ever before. This is where Artificial Intelligence (AI) is proving transformative. It is no longer just a competitive advantage. AI has become essential for maximizing launch performance in an environment where traditional approaches increasingly fall short.

Understanding the changing launch landscape

The pharmaceutical launch environment has undergone significant transformation over the past five years. Several key factors have contributed to this shift. The rise of specialty medications has fundamentally altered the launch landscape to require more sophisticated approaches to patient identification and support. Simultaneously, the industry has rapidly shifted toward omnichannel marketing strategies, requiring more nuanced engagement across multiple touchpoints as HCPs increasingly prefer digital and hybrid interactions. These changes coincide with heightened scrutiny from payers and providers, who now demand more robust evidence of both clinical and economic value — forcing launch teams to develop and communicate more sophisticated value propositions than ever before.

Perhaps most challenging is the intensified competitive environment, where the sheer volume of launches has increased dramatically. Multiple products often target identical patient populations, creating a crowded marketplace where breaking through requires exceptional strategy and execution. This competition plays out in compressed time frames, as asset lifecycles have shortened substantially. Recent macroeconomic and regulatory changes, such as the Inflation Reduction Act, have further compressed timelines and necessitated rethinking of launch strategies. These factors have contributed to a downward trend in launch performance, revealing the need for more data-driven, AI-enhanced approaches to launch excellence.

Teams must fully optimize on all launch opportunities and realize the full market potential quickly to maximize return on investment before patent expiration or competitive entry.

The power of AI in predicting launch success

What makes AI particularly valuable for launch optimization is its ability to analyze massive volumes of data across multiple dimensions; even more compelling

is how the new technology can help inform strategic decisions that previously were not possible in real time. While traditional approaches might assess a handful of key metrics, AI can simultaneously evaluate hundreds of variables and uncover patterns and relationships that human analysts would not recognize.

Applying AI to the building blocks of a successful launch plan provides a future-proof framework that examines an interconnected web of elements spanning multiple functions, data sources, and benchmarking to support launch performance. Market factors serve as the foundation, some of which include but are not limited to competitive landscape dynamics, market size potential, growth trajectories, and various barriers to entry that might impede success. These interact with commercial factors, such as promotional investment allocation, messaging effectiveness across different stakeholders, optimal channel mix, and sales force deployment strategies.

By analyzing these factors against historic launches — successful and unsuccessful — AI can identify the most significant predictors of success.

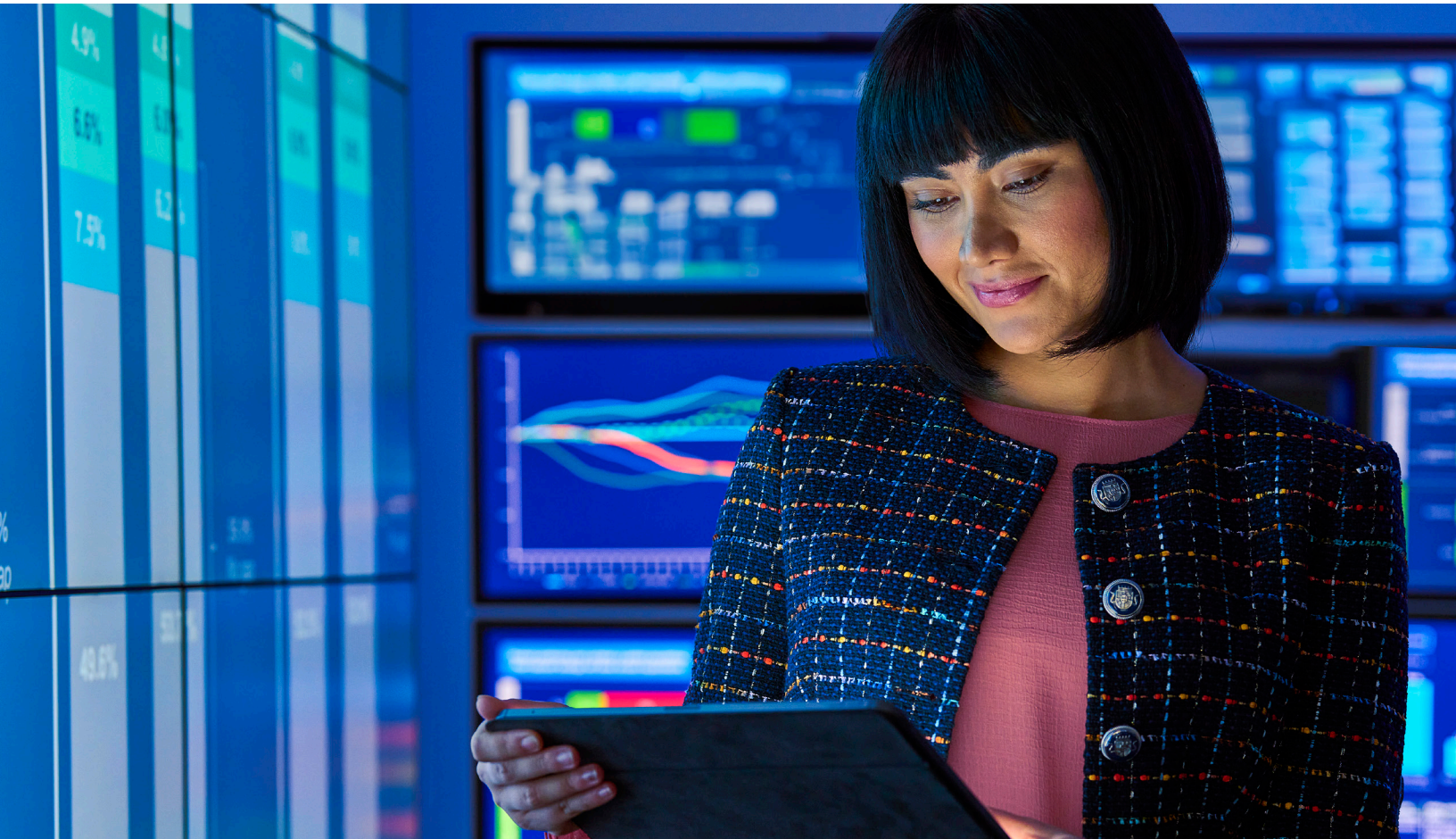
From insight to action: Translating AI predictions into launch strategy

The true value of AI-driven launch prediction lies not in the insights themselves but in how AI can transform tactical decisions and drive real-world outcomes. This process can be implemented across three progressive stages:

Stage 1: Inferring drivers of launch success

The foundational step of AI focuses on analyzing historical launch data to identify key drivers of launch success. Unlike traditional approaches that might rely on basic benchmarking or simple correlations, AI can detect complex interdependencies between seemingly unrelated factors.

For instance, AI might reveal that when launching specialty care products, the interplay between timing of deployment of medical science liaisons, determining the optimal omnichannel mix, and improving HCP engagement has a more significant impact on early adoption than previously thought. These insights become the foundation for more informed launch planning.



Stage 2: Guiding launch planning

Armed with data-driven insights about drivers of success, organizations can make more strategic decisions about resource allocation, timing, and tactical emphasis. Rather than relying on conventional wisdom or standard practices, teams can prioritize the specific factors most likely to drive success in their launch scenarios.

This might mean reallocating resources from traditional high-investment areas to previously underemphasized tactics identified as critical by the AI analysis. For example, AI analysis can identify critical factors across multiple scenarios: identifying the impact of territory vacancies, optimizing hiring and training plans, and highlighting capability mismatches that affect launch performance. These data-driven insights enable teams to expedite timelines with greater urgency and confidence. AI analysis can also assist in customer scenarios with internal investment and financial data to support launch decisions, enabling coordinated action across multiple teams, stakeholders, and internal systems.

Stage 3: Enabling active tracking and course correction

Perhaps the most powerful application comes through real-time monitoring and adaptive decision-making throughout the entire launch journey, from pre-launch preparation to post-launch optimization. By continuously tracking launch performance against AI-generated success predictors, teams can identify early warning signs of underperformance and make informed adjustments. Importantly, AI can also quantify the potential costs of inaction and evaluate the impact of underperformance, creating urgency around critical decisions that traditional approaches often fail to systematically capture.

This represents a fundamental shift from traditional approaches where course correction often occurs only after significant time has elapsed and opportunities have been missed. AI enables a more responsive, agile approach to launch management that can significantly improve outcomes.

Building launch prediction capabilities with AI: A stepwise approach

For organizations looking to develop launch prediction capabilities that are AI-powered, a structured, progressive approach is essential. This typically involves three key phases:

Phase 1: Data foundation

The critical first step is establishing a robust data foundation. This includes:

- Centralizing and standardizing external market data and benchmarks
- Developing systems to capture and organize internal launch readiness data
- Ensuring accessibility of historical launch performance metrics
- Creating integrated data environments that can support AI applications

Organizations often begin with external data, which provides a wealth of market intelligence while simultaneously building capabilities to better capture internal metrics.

Phase 2: Pilot implementation

With data foundations in place, targeted pilot programs demonstrate value and build organizational confidence. Effective pilots typically:

- Focus on specific use cases that address known pain points
- Utilize AI to analyze historical launches and identify success predictors
- Apply insights to upcoming launch planning in limited contexts
- Measure outcomes to demonstrate tangible value

These pilot programs serve as proof points, building momentum for broader implementation while demonstrating practical applications of the technology.

Phase 3: Enterprise-wide capability

As pilot programs demonstrate value, firms can expand to enterprise-wide implementation with more sophisticated capabilities:

- Active launch tracking against AI-generated success predictors
- Real-time course correction recommendations
- Integration with broader launch excellence programs
- Continuous learning and refinement of predictive models

This phase represents the full realization of AI's potential in launch optimization, enabling truly data-driven launch excellence across the organization.

Looking ahead: Future possibilities

The evolution of AI launch prediction capabilities continues to accelerate, with several promising frontiers:

- **Cross-functional impact assessment**. Better understanding of how various functional activities (e.g., medical, market access, marketing) interact to drive success
- **Global-local optimization**. Balancing global strategy with local market needs through more sophisticated market-specific prediction models
- **Human performance factors**. Incorporating a comprehensive view of human capital influences, including the effectiveness of sales reps, team competencies, leadership capabilities, organizational alignment, the impact of territory vacancies, and personality/skill matching to specific market conditions

The organizations that most effectively harness these capabilities will gain significant advantages in an increasingly competitive launch environment. By building systematic approaches to AI-driven launch prediction, pharmaceutical companies can dramatically improve the likelihood of successful product launches and ultimately deliver better outcomes for patients.

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