INIZIO

Will 2025 be a tipping point to unlock innovation in pharma commercialization?

Data, tech, and AI trends shaping pharma commercialization in 2025

January 2025

Cover image created using Midjourney and Adobe Firefly generative AI tools

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It is undeniable that data, tech, and Artificial Intelligence (AI) will completely revolutionize the way drugs are developed and commercialized. Today, we're seeing tantalizing glimpses of that potential, as pharma companies begin to pilot and validate how these new capabilities can benefit their teams and workflows.

We all know that AI promises so much in terms of delivering greater speed, insights, efficiencies, and value. It's exciting, but also uncertain, with many companies struggling to effectively turn their technological investments into tangible and scalable returns.

At Inizio, we partner with clients every day as they seek to use innovative solutions to address their pain points – from deriving smart insights from vast and disparate datasets to drive their decision-making, to equipping their teams and stakeholders with the most effective tools and insights to support healthcare professionals or patients achieve optimal outcomes.

> ***"The key to unlocking the full potential of data, tech, and AI for pharma lies in aligning technological investments with strategic requirements, building robust data ecosystems, and fostering a culture of collaboration and learning across teams. Companies that prioritize human expertise alongside innovation will not only scale faster but also create sustainable value for healthcare professionals and patients alike.***
>
> **Mary-Kate McGarry, VP, Corporate and Global Strategy, Inizio**

Part 1: A snapshot of where we are now

2024 was a pivotal year of transformation for the pharma industry. As companies continued to adapt their drug portfolios and development strategies post-Covid, they also faced the dual challenge of inflationary pressures and the need to course-correct to build resilience and energize future growth.

Amid this dynamic, often-difficult landscape, advances in technology – particularly AI – accelerated at pace, creating exciting new catalysts for innovation. Across the industry, we see these advances starting to reshape work practices, unlock insights from dense and disparate datasets, and streamline content development like never before – all critical components for preparing, launching and driving commercial success of products. But alongside the undeniable progress came crucial lessons about the complexities of integrating these powerful tools and the vital need to balance innovation with human expertise.

Here we spotlight four recent AI advancements, highlighting the value they create but also the challenges and considerations they raise when embarking on similar innovations.

1. Improving Healthcare Professional (HCP) engagement through AI-powered tools
2. Benchmarking databases and 360° insights
3. GenAI for real-time analysis and insights generation
4. The emergence of medical large language models (LLMs)

> ***The most significant impact in 2024 has been the explosion of data and the proliferation of AI. Organizations are inundated with data and artificial intelligence, which has led to an increase in data volume and sophistication. This has created both opportunities and challenges for various sectors, including medical affairs.***

Dean McAlister, Executive Vice President, Inizio Biotech

1. Improving HCP engagement through AI-powered tools

Traditional methods of HCP engagement often rely on standard messaging and one-size-fits-all approaches.

AI algorithms can now be used to analyze vast amounts of data – including HCP preferences, behaviors, and past interactions – at incredible speed, enabling you to create highly personalized content and tailored journeys. This granular level of personalization can lead to more meaningful engagement, increased HCP satisfaction and, ultimately, better patient outcomes.

> ***Our AI-driven speech analytics tool operates at scale for everyone. The insights help us derive a 360° view of patients as they move through their support journey. The insights generated surface within hours, or a day of the call, providing the opportunity to adjust a program in close to real-time.***

Tom Mueller, VP, Digital Innovation & Product Management, Inizio Engage

We are harnessing the power of AI to enable better listening on patient support calls in our Patient Solutions programs, resulting in more accurate and supported employees and an enriched understanding of the voices of the patients we serve. Drawing upon our extensive experience with, and industry knowledge of contact centers and patient support, we have created a customized speech analytics solution. This solution allows us to unpack the emotion and sentiments of the patient with tags created across a variety of different topics, touchpoints and behaviors, which are customized for the specific needs of our clients.

> ***With the right audience intelligence tools and structures in place, pharma marketers have the ability to make smarter, bolder decisions and enact change quicker.***
>
> **Jamie Avallone, Chief Data Officer, Inizio Evoke**

However, personalization on its own will not be completely effective. From our experience, the greatest value and return on investment is gained when personalization capabilities are combined with human expertise spanning the therapy area, the product, the disease landscape, patient needs, as well as regulatory and compliance requirements. AI can optimize delivery, but the message itself must be rooted in this deep understanding and strategic insight to achieve the optimal impact.

2. Benchmarking databases and 360° insights

Benchmarking databases are a valuable resource for understanding industry best practices and identifying areas for improvement as a team plots the course for taking a product to market.

By providing access to key performance indicators, customized according to factors such as therapeutic area, these databases empower companies to make data-driven decisions and optimize their strategies and engagement techniques.

360° insights are now further enhancing this understanding by providing immediate, contextual feedback from HCPs, enabling real-time adjustments and continuous improvement. For example, our benchmarking observations have equally expanded to provide a 360-degree view. Once focused on sales reps visiting physicians, observations must now include medical teams, market access teams, key account management, omnichannel strategies, and even coaching initiatives to ensure strategic alignment in how physicians receive and interpret information. HCP 360°, our new insight offering, provides immediate, contextual feedback from the HCP.

From our experience, the principal challenge for companies lies in applying critical thinking and human interpretation to these insights, in a way that takes into consideration the wider factors of the product, the patient, and the market so that they are translated into customized and specific actions. Furthermore, effective change management of embedding these capabilities into standard work practice is often an afterthought. Data is a powerful tool, but it requires expert guidance and a human approach to scale to its full innovation potential.

3. GenAI for real-time analysis and insights generation

AI has long been celebrated for its ability to analyze structured data, but with the emergence of Generative AI (GenAI), that capability has evolved dramatically.

By understanding and generating human language, we are seeing that GenAI offers a cutting-edge approach to the real-time analysis of complex interactions and the generation of actionable insights. We are seeing this being done using a combination of "off-the-shelf" and custom-developed technologies leveraging the specific business context and challenge – this is the sweet spot for differentiation and value creation when piloting and scaling GenAI to drive better, faster insights.

However, achieving this combination has proved elusive for many in 2024. From our experience, the greatest innovations and successes arise when solutions are built with a multi-dimensional approach, addressing these core elements:

- Technology selection and strategy: Balancing off-the-shelf solutions with custom development, whilst considering data security, as well as ongoing maintenance and improvement needs.
- Commercialization context: Tailoring approaches to specific commercialization stages as the nuances and requirements will vary greatly, e.g., asset prioritization compared to launch planning.
- Therapy area and scientific expertise: Leveraging domain knowledge to account for unique factors and dynamics is vital.
- Stakeholder engagement: Ensuring alignment across colleagues, HCPs, and patients, embedding change management strategies that build confidence and trust in the models.

By integrating these elements into a cohesive strategy, organizations can unlock the full potential of GenAI, enabling not just better insights, but transformative outcomes for their stakeholders.

4. The emergence of medical large language models (LLMs)

Medical LLMs are rapidly changing the landscape of medical communications and commercialization.

These advanced AI systems, trained on vast amounts of medical data, can analyze and synthesize information with remarkable speed and accuracy. With custom development and training, LLMs are capable of generating a first draft of a complex medical publication, complete with accurate citations and insightful analysis, or analyzing market research data and identifying key trends to inform strategies.

Although they're powerful tools that augment capabilities, LLMs require careful guidance and interpretation. For example, an LLM may generate a technically accurate report, but it lacks the nuanced understanding of patient needs and communication styles that a skilled medical writer brings to the table.

With that in mind, our perspective is that the true value of LLMs lies in the synergy between human expertise and AI capabilities.

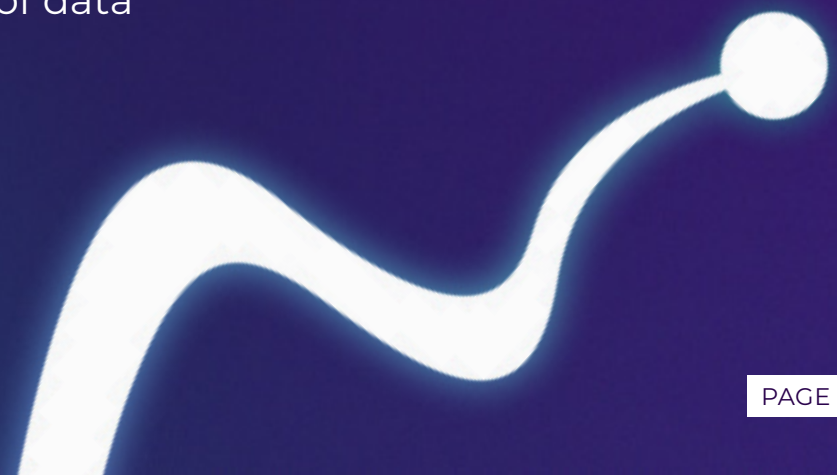
> ***"Medical teams will find that even with the best and most well-intentioned LLM-powered outputs, the optimal expression of AI-powered output is a mature relationship between human and machine wherein humans layer on strategic relevance and contextual awareness. This partnership is the starting point from which truly transformational value must come.***
>
> **David Woods Vice President, Medical Analytics and Innovation Portfolio Lead, Inizio Medical**

Part 2: 2025 and beyond

Looking ahead, AI will continue to become more powerful and, if used correctly, helpful in navigating the complexities of product commercialization.

In this section, we explore five areas that we expect to see advance this year, along with our recommendations on how to optimize your investment.

1. The rise of agentic AI and a revolution in workflow management
2. AI-powered tools for hyper-personalization
3. Predictive analytics for proactive commercial decision-making
4. AI-augmented clinical trial optimization
5. Human-in-the-loop: The key to harnessing the power of data



1. The rise of agentic AI: transforming workflow management

Agentic AI is the next step in the AI evolution, one in which tools act independently to manage complex, multi-step processes. With the right support by human experts, AI agents will streamline processes from creative development through MLR (Medical, Legal, Regulatory) review, to omnichannel distribution, increasing operational agility and efficiency. Agentic AI systems can adapt and learn on-the-fly, becoming increasingly efficient and context-aware, and eventually creating an entirely new approach to workflow management.

The potential for agentic AI is vast, but it will be able to help the human workforce in areas such as:

Handling medical information requests by providing accurate and timely information to HCPs, freeing up medical affairs teams for more strategic activities.

Supporting content generation by drafting documents, creating presentations, and summarizing research to accelerate knowledge sharing and communication.

Driving insight discovery by analyzing data, identifying patterns, and generating reports, empowering teams with data-driven decision-making.

By creating fully integrated, flexible workflows that continuously learn and optimize, agentic AI will allow humans to focus on higher-value activities that require strategic thinking, relationship-building, and creative problem-solving.

We expect agentic AI to redefine how work is done, supporting humans to achieve greater efficiency, productivity, and innovation.

> ***In 2025, it is predicted that nearly 80% of processes and analyses will be seamlessly supported by AI. This shift is expected to fundamentally transform how projects are approached, allowing consultants to focus more on strategic thinking, in-depth analysis, and pushing the boundaries to elevate the value brought to clients.***

Remco op den Kelder, CEO of Putnam, an Inizio Advisory company

2. AI-powered tools for hyper-personalization

The potential benefits of effective and tailored hyper-personalization in healthcare are immense. By building an omnichannel strategy that is optimized with AI, thoughtful, targeted messaging can help HCPs better navigate complex therapy areas and prescribing options, while empowering patients to engage more fully with their treatments, ultimately improving adherence and outcomes. Given these advantages, we anticipate increased investment in piloting, refining, and scaling hyper-personalization initiatives in 2025.

However, with a myriad of AI tools promising to deliver hyper-personalization, it's crucial to focus efforts on selecting the right solutions and optimizing your investment of time and resources.

From our experience, there are several considerations, including a clear definition of requirements and desired outcomes, a market scan for potential off-the-shelf solutions, an assessment of ways to tailor or customize these solutions for your exact needs and context, and importantly, scoping out a pilot that establishes a course to test against requirements that enables a subsequent investment decision. Regarding pilot mobilization, it is critically important to clearly define requirements for testing and measurement, as we are seeing a common challenge among our clients to clearly quantify the cost-benefit assessment. These may span data security, model customization, compliance and ethics considerations, value creation and measurement KPIs, model maintenance, among other items. Also, given the breadth of options in the market, there may be the opportunity to run parallel pilots to test and compare the effectiveness of solutions.

Beyond this, and to ensure any pilots and subsequent investments deliver the desired impact, it is vital to ensure that time is spent, not only on selecting the right tool, but also on upskilling users with both the knowledge to effectively use your chosen solution and an understanding of the value it will bring, so they are motivated and ready to adopt.

> ***Up to now, focus has largely been on the capabilities of GenAI to speed up the content production process. As we move into 2025 and beyond, leaders will need to focus on empowering their teams to unlock the technology's true potential; in dynamic simulations and in-the-moment performance support, in helping teams make better decisions based on insight from unstructured data which previously would have been too time consuming or costly to analyze at scale and in creating truly thoughtful, targeted (and compliant) messaging.***

Wil Procter, Director of Strategy and Innovation, Nazaré, and Inizio Engage Company

3. Predictive analytics for proactive commercial decision-making

AI can leverage predictive analytics, market simulations, and dynamic monitoring to optimize commercialization strategies, enabling proactive decision-making, risk reduction, and agile adaptation to market changes. In 2025, we expect the pace of development and volume of related use-cases to gather significant pace based on the lessons learned through piloting activity in 2024.

The key lesson learned is about converging complementary skill sets to appropriately frame the business questions and challenges being tabled. From our experience, these include the right combination of business function input (e.g., Medical Affairs, Commercial), commercialization expertise and know-how, therapy area, and scientific expertise, as well as technical know-how and expertise. A secondary, but mission-critical, consideration relates to data - a fundamental factor for organizations seeking to deepen these capabilities should focus on building robust data infrastructure and fostering a data-driven culture to optimize the value of their data, as well as for predictive insights. The potential of deriving better, faster insights from data relies on the continuous improvement and quality of the data – without these elements in place, it will be challenging to maintain pace of progress and to scale.

> ***"By embracing the principles of continuous evolution and improvement, organizations can thrive in this ever-changing world of omnichannel marketing, delivering hyper-personalized and integrated experiences that drive trust and loyalty.***
>
> **Will Reese, Chief Innovation Officer, Inizio Evoke**

4. AI-augmented clinical trial optimization

AI can significantly accelerate drug development by enhancing various aspects of clinical trial design and helping to predict potential safety and efficacy issues. One way AI can help do this is through optimizing clinical trial design. Since AI algorithms can analyze vast datasets, including electronic health records (EHRs), genomic data, and previous trial outcomes, AI can be used to help identify and select the most suitable patient populations for participation in a clinical trial. In addition, trials can be optimized by utilizing AI to run simulations, looking for potential outcomes of different trial designs, as well as creating adaptive trial designs that modify based on interim results. These optimization techniques can lead to more efficient, lower cost, and ultimately faster clinical trials.

In addition to optimizing clinical trial conduct and design, AI can be utilized to predict safety and efficacy outcomes. By analyzing preclinical data, historical clinical trial data, and real-world patient outcomes, AI can be used to predict adverse events in clinical trials. AI can also be used to monitor trials for any patterns that might indicate a safety concern, through monitoring of patient data during the trial. In addition, AI can help predict efficacy issues and can be utilized to analyze data from multiple sources (e.g., lab tests, imaging, genetic information) to predict treatment outcomes. This allows researchers to monitor the trial's progress and make adjustments quickly to optimize treatment efficacy. AI is also an efficient tool to look for biomarker response to a particular drug and to predict drug-drug interactions.

Companies need to embrace AI in all stages of development, including R&D, clinical trials, and regulatory approval, to help ensure compliance while maintaining human oversight in critical decision points. Utilizing AI to optimize trial design and help predict safety and efficacy issues can shorten timelines and reduce costs of clinical trials, as well as accelerating time to regulatory approvals. By leveraging data-driven insights, AI enhances both the efficiency and success rate of drug development, bringing new treatments to market more quickly and safely.

> ***By optimizing trial design and predicting safety and efficacy, AI accelerates drug development, reducing costs and timelines while enhancing the likelihood of bringing new treatments to market faster and more safely.***

Anthony Haywood, Vice President, Clinical Trials Optimization, Inizio Medical

5. Human-in-the-loop: The key to harnessing the power of data

Despite a lot of focus on technology and its capabilities, it's vital to remember the role humans will continue to play in AI. The synergy between humans and AI will unlock the technology's true potential, accelerating innovation, drug development, and commercialization.

How human-in-the-loop drives results:

Enhanced accuracy and trust:
Human experts provide critical oversight, ensuring AI models are accurate, reliable, and free from inaccuracies. This builds trust in AI-driven insights and fosters confidence in their application.

Ethical considerations and responsible AI:
Humans can proactively address ethical concerns, mitigate potential biases, and ensure AI is used responsibly and transparently from the outset.

Continuous learning and improvement:
Human feedback allows AI models to learn and adapt continuously by taking into account new factors. This improves the models' performance and ensures they remain relevant in a dynamic environment.

Deeper insights and creative problem-solving:
Combining AI-driven insights with human expertise leads to a deeper understanding of complex challenges and fosters creative problem-solving.

> ***As we navigate an era defined by a proliferation of data and novel technology, the true potential of AI lies not just in its ability to process information at unparalleled speed, but in how it amplifies human expertise to drive meaningful change. At Inizio, we believe that combining the precision of AI with human empathy and insight is the blueprint for true transformation.***

Kelly Malloy, SVP, Customer Engagement, Augmented Intelligence & Artificial Intelligence, Inizio Medical

Partner with Inizio to transform your 2025

Inizio is uniquely positioned to help pharma companies navigate commercialization in the evolving landscape of data, tech, and AI. With our deep expertise and comprehensive suite of solutions, we empower our clients to harness the power of these advancements and achieve their business objectives.

Expertise powered by insight
Our experts leverage cutting-edge data, technology, and AI to transform complex information into actionable insights, empowering faster, smarter, and more impactful decisions.

Bespoke solutions
At the forefront of innovation, we harness the power of human and AI collaboration to craft bespoke solutions that consistently deliver lasting value and results for our clients.

Simplifying the complex
We deliver a seamless experience while upholding the highest standards of quality and governance. Through continuous improvement of our data, technology, and AI models, we ensure our clients receive the most accurate and reliable insights, ensuring compliance and mitigating risks.

> ***At Inizio, we believe AI's potential in health and life sciences must be balanced with robust governance. Our focus is on ethical innovation that enhances human decision-making and safeguards patient outcomes. By prioritizing governance from the start, we ensure AI advancements are trustworthy and sustainable.***

Gavin McShera, Group Chief Information Officer, Inizio

Inizio has developed a number of proprietary technologies and AI solutions to address the specific needs of the pharmaceutical industry.

These include:

Faster decision-making	Combining human expertise and AI-driven insights, InizioNavigator.ai drives faster strategic decision-making when bringing drugs to market. Tools include ClarityNav, which uses GenAI to assess medical insights and demonstrate impact, and AssetNav, which harnesses AI and machine learning to prioritize pipeline assets.
Audience personalization and targeting	A suite of tools that combines deep insights into HCP and patient behaviors, treatment patterns, and prescribing habits **with personalization and targeting of key information and data.**
Customer experience insights	HCP 360° offers a comprehensive view of interactions with healthcare professionals, including their perceived value, interests, behaviors, and what they want from future interactions; empowering pharmaceutical companies with insights to inform strategic alignment and execution – measuring strategic impact from the customer experience.

To learn more about how Inizio can help your organization harness the power of data, tech, and AI, please **visit our website** or **contact us today.**

Future horizons

Explore our latest 'Future horizons' webinar series, where we unravel the latest advancements of AI's transformative power in healthcare.

Resources and recommended reading list

Human-in-the-loop:

1. How People-Powered Data & AI Can Safely Drive Strategic Alignment
   https://www.stemhealthcare.com/insights/how-people-powered-data-ai-can-safely-drive-strategic-alignment/
2. Healthcare is More Human When We Design AI Around People
   https://healthcare-digital.com/technology-and-ai/healthcare-is-more-human-when-we-design-ai-around-people
3. Customer Experience Insights with STEM
   https://www.stemhealthcare.com/customer-experience-insights-with-stem/
4. Unlock Your Potential with Audience Intelligence
   https://www.inizioevoke.com/latest/article/unlock-your-potential-with-audience-intelligence
5. The Risk of Replicating Social Bias in Synthetic Patient Data: The Need for Human Intelligence Partnered with AI
   https://www.researchpartnership.com/insights/the-risk-of-replicating-social-bias-in-synthetic-patient-data-the-need-for-human-intelligence-partnered-with-ai/

The impact that data, technology, and AI can have:

1. How Can Digital Technologies Help Pharma Meet Changing Needs of HCPs and Patients
   https://pharmaphorum.com/digital/how-can-digital-technologies-help-pharma-meet-changing-needs-hcps-and-patients
2. Rare Disease Opportunities in the AI Age: Improving Underdiagnosis & Undertreatment
   https://www.putassoc.com/insights/rare-disease-opportunities-in-the-ai-age-improving-underdiagnosis-undertreatment/
3. The Value of AI, The Value of People: Perspectives from Putnam's CEO
   https://www.putassoc.com/insights/the-value-of-ai-the-value-of-people-perspectives-from-putnams-ceo/
4. Life Sciences Market Research: Safely Digging Deeper for Competitive Edge
   https://www.researchpartnership.com/insights/life-sciences-market-research-safely-digging-deeper-for-competitive-edge/
5. The Phase II Inflection Point: Investing to Maximize Asset Value
   https://inizio.com/insights/the-phase-ii-inflection-point-investing-to-maximize-asset-value/
6. AI and the future of work: Why culture will always win
   https://vynamic.com/insights/ai-and-the-future-of-work-why-culture-will-always-win/