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Indiaâ??s next leap in pharma: AI-led consulting from lab to market

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AI adoption in healthcare could transform national growth, and pharmaceutical innovation is among the most promising contributors

India’s life sciences sector is standing at the threshold of a decisive new chapter. In the Union Budget 2026–27, Rs 10,000 crore was committed to the Biopharma SHAKTI initiative — a five-year effort to boost capacity in biologics and biosimilars, strengthen clinical trial networks, and help India capture five percent of the global biopharma market. Such a commitment signals that India’s next advantage will come not from scale alone, but from breakthroughs in science and technology, supported by human ingenuity that can translate ambition into measurable outcomes.

Artificial intelligence (AI) will be central to this shift. The real question is not whether the industry adopts AI, but how effectively it integrates intelligence into decision-making across the pharmaceutical lifecycle. Realizing that potential requires more than simply adopting new technology. It demands new decision frameworks, integrated data systems, and AI-led consulting that connects research, development, and commercialisation.

AI-led consulting: The missing link

As AI adoption accelerates across industries, the pharmaceutical sector faces a different challenge: translating data and algorithms into faster, better scientific and commercial decisions. This is where AI-led consulting can make a significant difference.

Unlike traditional consulting models that focus solely on functional areas such as research and development, regulatory affairs, manufacturing, or commercial strategy, AI-led consulting integrates these components through unified data architecture and predictive analytics.

This approach connects lab data with clinical trial design. It aligns clinical insights with regulatory submissions, merges manufacturing intelligence with supply chain forecasting, and relates market analytics to patient access strategies, among other integrations. By incorporating AI into decision-making workflows, pharma companies can simulate outcomes before committing resources, identify risks more promptly, and adapt more swiftly to changing circumstances.

In practice, expertise-based professional services firms such as ZS combine deep life sciences knowledge with advanced analytics and AI-powered platforms, linking strategy to execution across discovery, development, supply chains, commercialization and patient engagement.

Solving scientific challenges

Drug discovery has always been a slow and highâ??stakes climb. Designing a new therapy is nothing like producing an established generic medicine. The science carries deeper uncertainty, higher stakes and timelines that in traditional models stretch beyond six years. Discovery can consume roughly 35% of total development costs, and globally, the average price of bringing a drug to market sits around $2.8 billion. Too often, much of that is spent on drug candidates that fail late in the process.

This is precisely where intelligent systems are changing the equation. They act as decisionâ??making partners, accelerating target identification, lead optimization and preclinical testing, while learning quickly from paths that will not work. Advanced modelling and digital screening can examine hundreds of molecular hypotheses in days instead of months and trim the field to the most promising candidates.

Early checks on absorption, distribution, metabolism, excretion and toxicity bring likely safety concerns into the open well before heavy investments are made. By integrating diverse datasets, from genomic mapping and preclinical results to clinical records and scientific literature, AI can translate complex science into clear, actionable insights. The outcome is earlier, more confident choices that raise trial success rates and cut down costly lateâ??stage failures.

Embedding innovation into the lifecycle

The impact goes well beyond science. AI adoption in healthcare could transform national growth, and pharmaceutical innovation is among the most promising contributors. NITI Aayog estimates that widespread AI adoption could help triple India’s GDP by 2035. That scale underscores both the opportunity and the need to embed these capabilities effectively.

In practical terms, cutting even a year or two from the discovery phase is more than a competitive advantage. It is a faster route for lifeâ??saving treatments to reach patients. Each month removed from the timeline represents money saved and benefit delivered sooner.

The challenge now is ensuring these gains translate into operational reality. That requires processes that align with regulatory pathways, match commercial timelines, and connect research with manufacturing and clinical operations. When those elements are in place, decisionâ??centric technology becomes embedded in everyday workflows. The result is science that moves smoothly through the development lifecycles and into measurable impact.

Supply chain resilience

A resilient supply chain is about more than efficiency. It must anticipate change, adapt without disruption and maintain trust in delivery. Predictive demand modelling, scenario planning and realâ??time logistics control help sponsors maintain inventory, reduce waste and ensure critical medicines, including those needing specialist handling, reach patients on time.

Endâ??toâ??end distribution brings its own advantages. With greater visibility from manufacturing through regulatory approvals to trial sites, organisations can reduce surprises, open more options and respond quickly when issues arise. Resilient supply chain designs enable organisations to make faster, more confident decisions while ensuring that lifeâ??saving medicines reach patients when they are needed most.

Conclusion

When technology, expertise, and policy move in alignment, India’s opportunity becomes transformational. The country can move beyond its generics legacy toward leadership in biologics, biosimilars and next-generation therapies. With the right AI-enabled decision frameworks and strong public-private partnerships, India will not only participate in the next chapter of global healthcare, it will help define it.

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