

2nd Club



Club Founder
Dr. Mahmoud Bahgat



Medical Affairs Club

**Beyond Knowledge Transfer: Medical
Affair's Evolving Role as Insight
Generator**

Online zoom

7 pm Egy - 8 pm KSA - 9 pm UAE



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Wednesday 19-2-2025



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18+ years of experience in multiple global Pharma mainly in Medical Affairs. Diversified portfolio and markets. Local, regional and global roles in leading medical projects.

Published researcher @clinicaltrials.gov

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Transformative coaching

**Global woman power leader award 2024
Impact on healthcare.**

Healthcare, leadership and empowerment speaker

**BSc Biology;
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Beyond Knowledge Transfer: Medical Affairs Evolving Role as Insights Generator

Leveraging Current Trends for Strategic Decision-Making in Medical Affairs



Agenda

- 1 The Evolving Role of Medical Affairs and Insights
- 2 What Are Medical Insights?
- 3 Benefits of Leveraging Medical Insights
- 4 Integrating Medical Insights into Organization Strategy
- 5 The Role of AI in Medical Insights Generation
- 6 The Role of Digital Platforms in Medical Insights Generation
- 7 The Role of Real-World Evidence in Medical Insights Generation
- 8 Challenges in Medical Insights Generation
- 9 How is the Environment and Ecosystem Changing to Adopt New Trends
- 11 Medical Affairs Vision 2030
- 12 Conclusion
- 13 Discussion

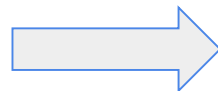
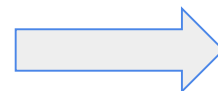
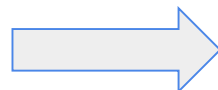
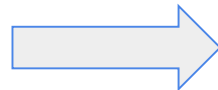
TRADITIONAL MEDICAL AFFAIRS

Support function

Focused on medical education

Reactive insights

Limited real-world data usage



MODERN MEDICAL AFFAIRS

Strategic decision-making role

Informs R&D, market access, commercial strategies

Proactive, predictive analytics

Extensive use of RWE, AI, and digital engagement

According to Mckinsey report (*A vision for medical affairs in 2025*), medical affairs is now a third pillar of pharma, alongside R&D and commercial, driven by data and **medical insights**.²

What are medical insights?



Medical insights are **actionable knowledge** derived from clinical data, RWE*, patient behavior, digital tools, HCP interactions and other resources

They provide pharma companies with a deeper understanding of the **external therapeutic environment**, helping shape strategy.

360 added value medical insights bring to Healthcare stakeholders?



For pharma

Informs R&D, product strategy, and commercialization



For HCPs

Enables evidence-based treatment decisions



For patients

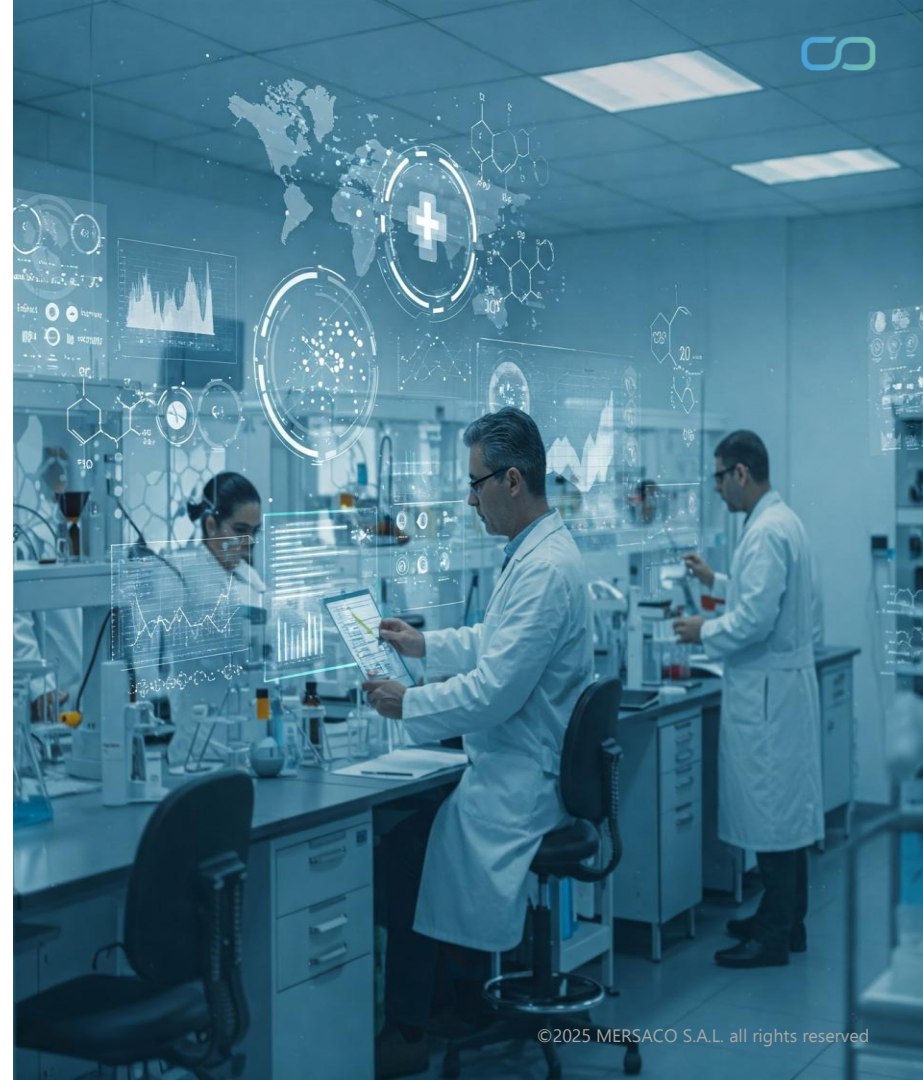
Leads to better health outcomes and personalized medicine



For payers

Supports reimbursement decisions with value-based evidence

How do medical insights generation impact the world of pharma?



How do medical insights help in drug development, market access, commercial strategy, and innovation?

Enhancing drug development

Informed decision-making: Insights guide selection of therapeutic targets and can inform clinical trial designs⁴

Risk mitigation: early indication of potential challenges allows for proactive adjustments



Accelerating time to market²

Efficient processes: by understanding patient needs, healthcare ecosystems and market dynamics, companies can streamline development processes



Informing commercial strategies⁵

Market alignment: insights into HCP perspectives and patient experiences enable tailored marketing strategies, ensuring products meet market demands



Driving innovation

Identifying unmet needs: engagement with patients and HCPs uncover gaps in current treatments, guiding the development of innovative solutions



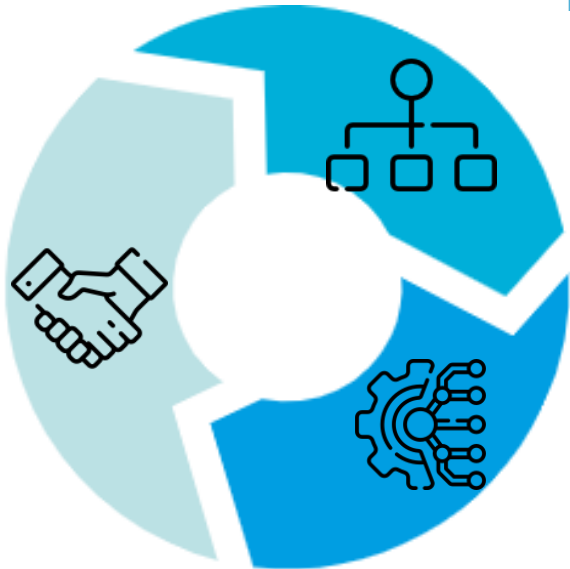
Is it mandatory to integrate medical insights into organizational strategy?



Once insights are generated, they must be effectively integrated into the organization to drive impact

Cross-functional collaboration:⁶

Encouraging collaboration between MA, R&D, and commercial teams ensures that insights are effectively utilized across the organization



Implementing robust frameworks:⁷

Structured processes: developing comprehensive frameworks for collecting, analyzing and disseminating insights ensures consistency and maximizes strategic value

Leveraging advanced technologies:

Utilizing AI and digital platform enhances the ability to gather and analyze large datasets, providing deeper and more accurate insights

*Traditional insight generation
relies on manual analysis*

Data processing and pattern recognition ⁸

AI can process millions of data points in real time
Predictive analysis allow pharma companies to anticipate treatment responses, disease outbreak and HCP behaviors

AI in medical insights generation

Natural Language Processing (NLP)¹

AI-driven NLP allows computer program to understand written and spoken human language extracting insights from unstructured data sources, including scientific literature, HCP notes...

Automating insights generation and reporting

Faster, more accurate, and data-driven decision-making

AI-generated post-operative reports

Example: **DeepRhythmAI** an innovative technology for heart rhythm analysis⁹

AI-driven HCP engagement

The use of AI to simplify access to medical information

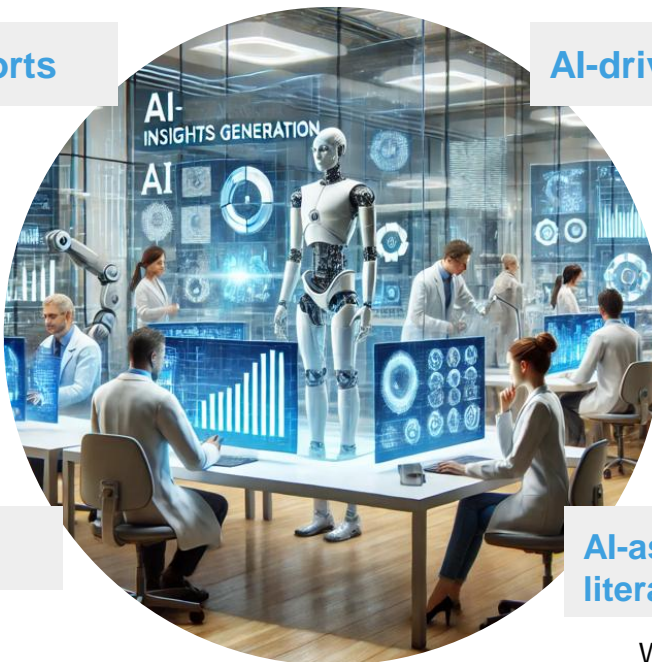
AI in clinical trials efficiency

The use of AI in longitudinal clinical trials with PROCOVA-MMRM^{*10}

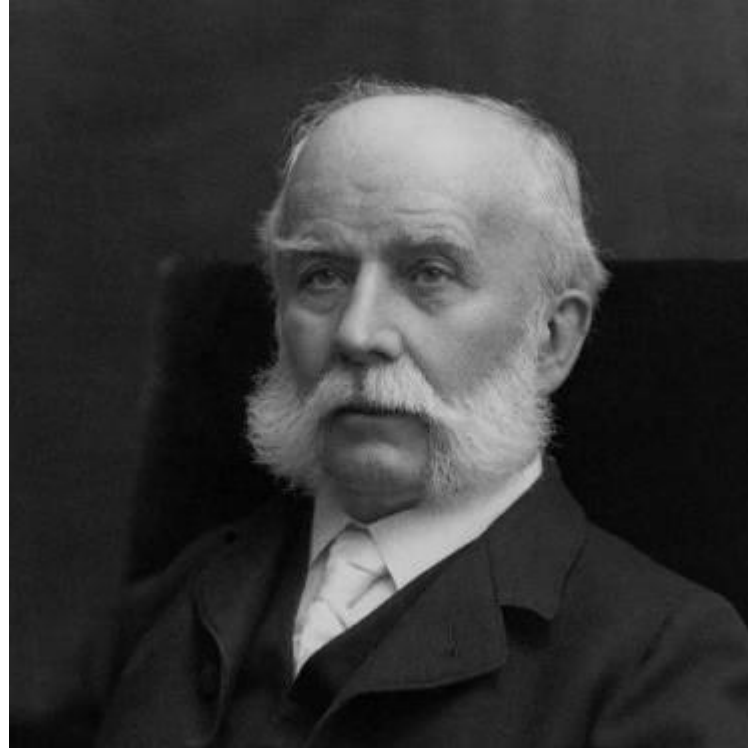
enhancing the precision of treatment effect , enabling reduction in sample size and enrolment time

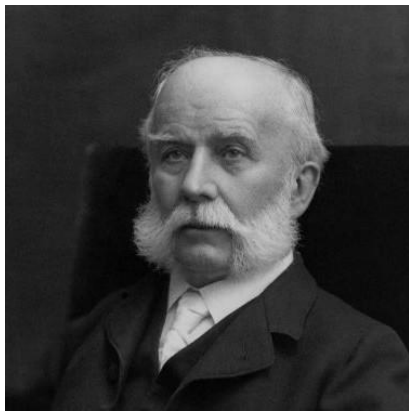
AI-assisted summarization of scientific literature

With tools that leverage large language models for searching literature and assisting academic writing¹¹



^{*}PROCOVA-MMRM= Prognostic Covariate-Adjusted Mixed Models for repeated measures. 9. [Lapid, N. \(2025\). Health rounds: AI tops surgeons in writing post-operative reports.](#) 10. [Ross, J. et al. \(2024\). Enhancing longitudinal clinical trial efficiency with digital twins and prognostic covariate-adjusted mixed models for repeated measures.](#) 11. [Bolaños, F. et al. \(2024\) Artificial intelligence for literature reviews: opportunities and challenges](#)





Charles Pfizer: Founder of *Pfizer*

Charlie: AI platform developed by Pfizer named after Charles Pfizer. Charlie has revolutioned Pfizer and pharma marketing and **its use is being expanded to medical insights generation** by allowing:

- Fact check
- Legal reviews
- Create and edit content
- Medical analytics



Digital platforms have become integral to the healthcare ecosystem, providing centralized and accessible repositories for medical data. These platforms facilitate efficient collection, analysis, and dissemination of medical insights, enhancing clinical decision-making and patient care

How do digital platforms enhance Medical insights?

Centralized data repositories¹³

Digital platforms aggregate data from various sources (EHR, wearable devices, patient surveys) offering a *holistic view* of patient health

Enhanced collaboration¹³

These platforms enable seamless collaboration among healthcare providers, researchers, and patients, fostering the sharing of insights and better patient care

Patient engagement³

Digital health platforms often include patient portals that allow engagement in their care plans, and contribute data for insights generation

Digital platforms are leading to more effective and patient-centric healthcare strategies



sorcero

Digital platform that *illuminate actionable insights form complex medical data.*¹⁴

Solutions provided are:

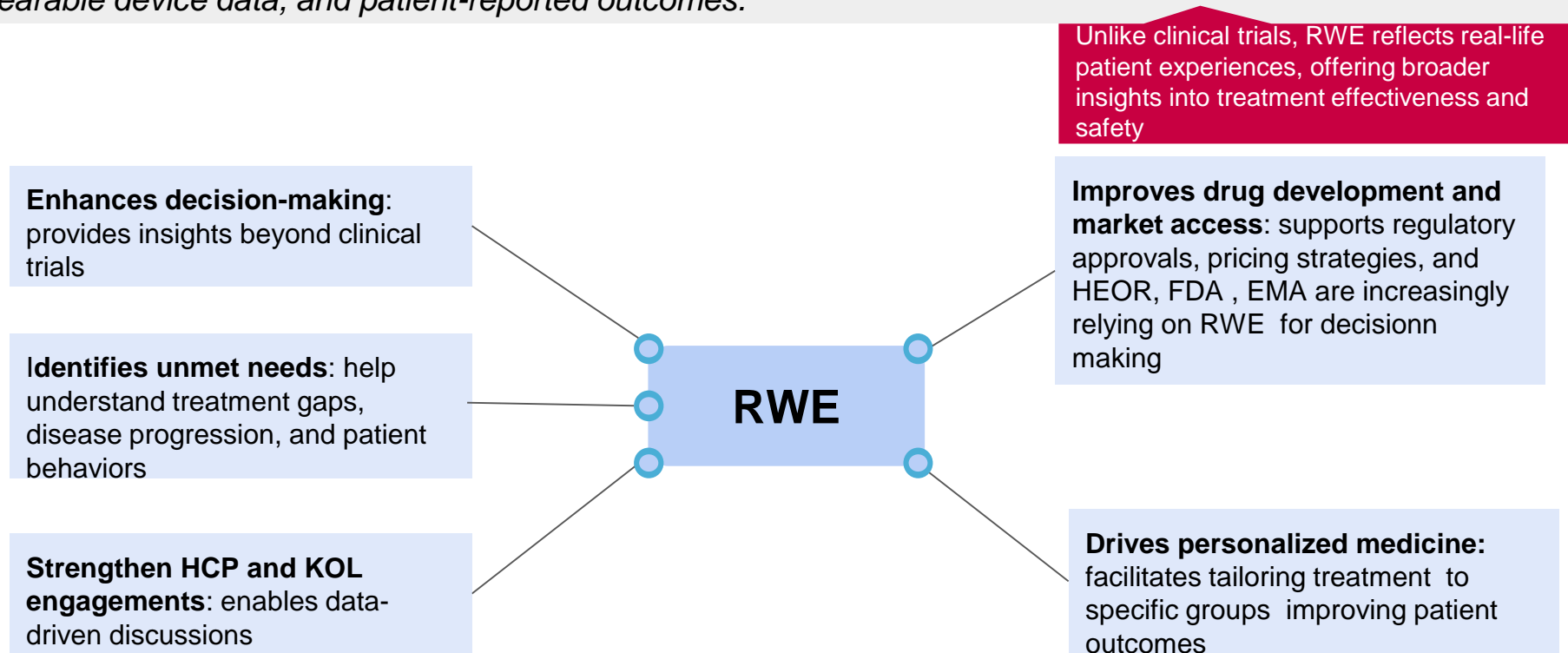
- Medical insights management (MIM):**
unifies and organizes structured and unstructured medical data in a single collaborative platform
- Publication monitoring
- Plain language summaries
- Intelligent systematic literature review

Medical teams can ask complex medical questions and instantly receive high quality answers responding to KOL queries faster than ever before



**How do RWE enhance
medical insights generation?**

RWE refers to clinical evidence derived from Real-World Data, which includes health records, insurance claims, wearable device data, and patient-reported outcomes.



A Data overload¹⁶

The vast amount of available data can be overwhelming, necessitating effective strategies to filter and prioritize information

B Ensuring data quality

Maintaining high standards of data quality is essential for generating reliable insights

C Ethical considerations¹⁷

Upholding ethical standards, particularly concerning patient confidentiality, is paramount

D Managing AI hallucination**Best practices for effective insights generation^{16,2}****Establish clear objectives**

Clearly outlining the purpose and desired outcomes of insights generation efforts ensures focused and relevant data collection

Foster a culture of continuous learning

Promoting an organizational culture that values ongoing learning and adaptability enhances the ability to generate meaningful insights

Invest in training and development

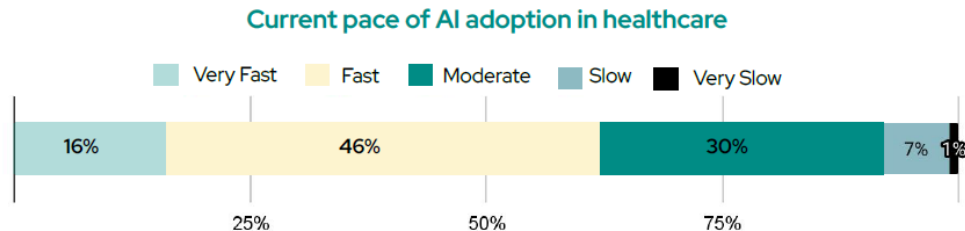
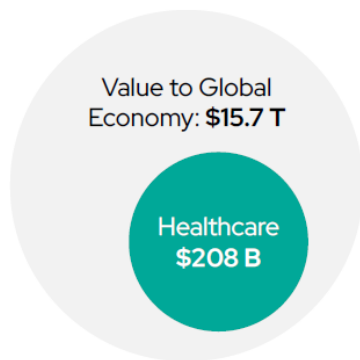
On the latest tools and methodologies in data analysis and insights generation to ensure proficiency and effectiveness

**Establish AI policy and engage AI roles in institutions**

How is the environment changing in the era of AI ?



AI in HealthCare – Market Size and Adoption



AI is reshaping the possibilities of our digital landscape and is revolutionising businesses. As AI continues to advance, it is the next competitive weapon for businesses to remain relevant and profitable in the modern world.



CEOs must lead the charge in transforming their organisations from the Digital to the Intelligent Enterprise to ensure their survival.

Source: MIT Technology Review Insights

Pharma investments in AI insights generation: GenAI use cases in Healthcare



Research and Development

Research

- Pre-Clinical Research
- Biomedical Data Analysis
- Targeted Therapy creation
- AI-enabled PubMed review

Development

- Patient Identification
- Patient Recruitment
- Clinic Trial design
- Safety Pharmacology
- Regulatory Filing



Commercial and Medical Functions

Commercial

- Content generation and personalization
- Promo Campaign

Execution

- Rep Next Best Action
- Customer Interaction Mngt.
- Staff Education

Medical Affairs

- New Claims & Outcomes Research
- KOL & Opinion Mining
- Adverse Event and Safety Tracking
- Regulatory & Compliance
- Adherence reporting



Manufacturing & Supply

Manufacturing

- Production Analysis and Process Optimisation
- Enhanced Predictive Maintenance

Quality

- Non-conformance sensing and quality assurance
- Regulatory adherence checking

Supply

- Demand Forecasting
- Optimal Loading, Routing, Warehouse and Shipping



Enabling Functions

Enabling Functions

- Financial Planning & Forecasting
- Expense Management

IT

- Cyber Protection
- Infrastructure Monitoring

HR:

- Talent Acquisition
- Training & Onboarding

Coms & Corp & Gov Affairs

- Sentiment & Engagement Analysis
- Reputation Management

AI has many use cases that are being explored across the Biopharma value chain

AI in HealthCare – Increasing Governance & Oversight



EU's Draft AI Act (June 2023) seeking to ensure AI systems used in the EU are *safe, transparent, traceable, non-discriminatory and environmentally friendly* and that AI systems should be *overseen by people, rather than by automation, to prevent harmful outcomes*.



**U.S. FOOD & DRUG
ADMINISTRATION**

FDA discussion paper (Oct 2023) seeking to manage *certain risks, such as biases in data used to train ML algorithms, or inaccuracies and completeness of these data, ethical and cyber security risks* of improper data sharing, and *role of monitoring* the performance of models to ensure they are reliable, relevant, and consistent over time.



**World Health
Organization**

WHO has released a new publication in Oct 2023 listing key regulatory considerations on artificial intelligence (AI) for health. It covers the following six general topic areas: *documentation and transparency, the total product lifecycle approach and risk management, intended use and analytical and clinical validation, data quality, privacy and data protection, and engagement and collaboration*.

Global regulatory bodies are working on AI policies across Safety, Transparency, Traceability, Data Bias, Ethics and Human Collaboration



Leading institutions like **Harvard Medical School** are recognizing the growing impact of AI in healthcare.

Their program, *Leading AI Innovation in Healthcare*, focuses on building essential skills helping professionals stay ahead as the field evolves¹⁸.



The importance of medical affairs leadership has come into even sharper focus.

The journey is not yet complete, and progress in transforming medical affairs has been hindered by:

- Capability gaps
- Budgetary constraints
- Organizational misalignment
- Competing priorities



There's an increasing need for supportive tools to navigate timely all the data and integrating digital and analytics into day-to-day decision making.

The fast-evolving landscape of data, analytics, and AI is already revolutionizing the way medical affairs operates.

Conclusion

Medical insights:

key driver of innovation

Informed decision-making in Medical Affairs

Driving organizational strategies

Through **AI, digital platforms and RWE**, organizations can generate real-time, data-driven insights that improve healthcare outcomes.

Successful integration requires:

- Cross functional collaboration across R&D, Medical Affairs and Commercial teams
- Advanced technology adoption
- Overcoming challenges related to data volume, quality, and ethical consideration



Let's hear from you!



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