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Measuring medical affairs' impact in the third era

A pragmatic approach

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The rapid transformation of healthcare calls for a closer examination of how medical affairs has evolved and how its future trajectory will unlock new value for patients, healthcare professionals, life sciences organizations and society at large. Charting a course toward a new third era featuring medical as a healthcare integrator necessitates a pragmatic approach that goes beyond medical activities to measure medical impact and examine its influence on external beliefs, knowledge and behaviors.

This paper explores two fundamental questions:

1. How can medical affairs begin its path toward the third era and effectively measure its impact?

2. How does medical affairs improve the quality of impact measures using a pragmatic, common-sense approach to metrics?

We believe that most organizations successfully entering this third era will adopt a holistic approach to medical impact measurement. This approach is now essential instead of simply "nice to have." Organizations will build a medical affairs impact capability that moves beyond traditional activity tracking and reporting. They will harness impact measurement to examine the effectiveness of strategy and execution critically, identify opportunities for greater impact and, ultimately, drive strategic decision-making.

The 3 eras of medical affairs

Medical affairs has undergone significant shifts through two distinct eras and is at the doorstep of entering its third evolution. The first era focused on ensuring safe product use via data dissemination and scientific dialogue with key opinion leaders (KOLs). The second era marked a paradigm shift, with medical affairs taking a more active role in shaping strategy, owning integrated evidence plans and engaging a more diverse set of stakeholders beyond KOLs.

Now, the third era demands medical affairs be the strategic partner to R&D and commercial, one that focuses on enhancing patient care in an increasingly complex and dynamic ecosystem. This evolution necessitates an overhaul in medical business reviews (MBRs), with a focus on holistic fulfillment of strategic imperatives and objectives.

FIGURE 1:

3 eras of medical affairs

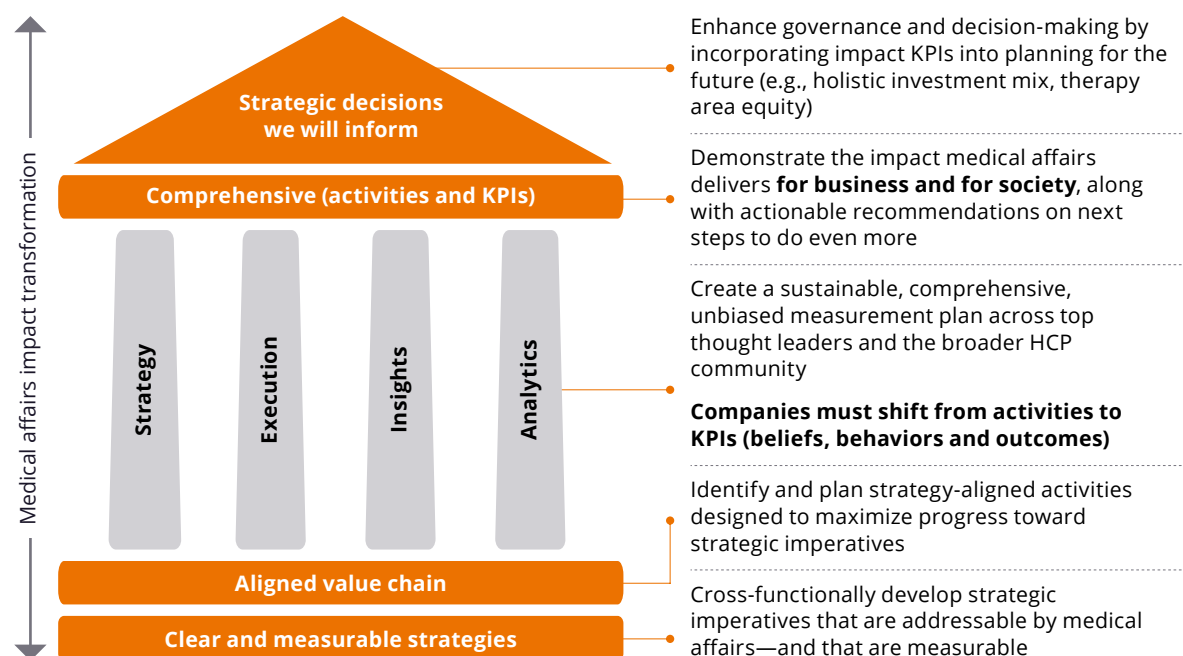| **First** era | **Second** era | **Third** era |
| Medical affairs as the scientific expert | Medical affairs as the strategic partner | Medical affairs as the healthcare integrator |

The need and challenges for measuring impact at scale

Today, there is a critical opportunity to leverage impact measurement not just as a reporting mechanism, but as a strategic compass—guiding the ongoing refinement of medical affairs' strategy to maximize value for external stakeholders and patients. This new paradigm shifts the focus from activity-based tracking to evaluating how effectively medical affairs is driving meaningful change in clinical practice and improving patient outcomes.

By embedding this thinking into MBRs, organizations can create structured forums to assess progress, realign strategies, measure outcomes and ensure leadership accountability.

FIGURE 2:

Building an MBR process that unlocks the power of impact assessment

Strategic decisions we will inform — Enhance governance and decision-making by incorporating impact KPIs into planning for the future (e.g., holistic investment mix, therapy area equity)

Comprehensive (activities and KPIs) — Demonstrate the impact medical affairs delivers **for business and for society**, along with actionable recommendations on next steps to do even more

Strategy / Execution / Insights / Analytics — Create a sustainable, comprehensive, unbiased measurement plan across top thought leaders and the broader HCP community

Companies must shift from activities to KPIs (beliefs, behaviors and outcomes)

Identify and plan strategy-aligned activities designed to maximize progress toward strategic imperatives

Aligned value chain

Clear and measurable strategies — Cross-functionally develop strategic imperatives that are addressable by medical affairs—and that are measurable

(vertical axis label: Medical affairs impact transformation)

Building a meaningful medical affairs impact capability has traditionally been quite challenging—and even today remains a formidable task. But many organizations are now tackling barriers head-on and achieving success by taking a different approach, one that emphasizes holistic impact measures and is anchored to strategy-oriented MBRs. As a starting point, several medical affairs teams have looked to other functions for inspiration and ideas. For example, marketing functions invest significantly in building marketing mix models and sales functions regularly build promotional response curves. While these models aren't perfectly accurate, they offer useful starting points that medical can adapt to its unique needs.

However, medical affairs faces two barriers that complicate organizations' quest for standardized impact measurement. First, the medical engagement model is fundamentally different, often focused on a narrow set of KOLs whose influence is indirect, cascading through networks rather than direct engagement. As a result, the practice changes influenced by medical affairs may occur among healthcare providers (HCPs) who were never directly engaged. Further, medical may not be able to fully account for all HCPs reached; as one example, understanding publication readership at an HCP level is simply impossible.

The second barrier lies in the absence of an ROI-like, North Star metric that can capture medical affairs' full impact. Unlike its commercial counterparts that anchor on ROI, medical affairs is a nonpromotional function and should not be evaluated using profitability metrics. If ROI measurement were tied to medical affairs' activities, this could compromise its ability to adhere to regulatory standards and guidance that emphasizes the need to maintain its nonpromotional mandate when engaging in scientific exchange. Instead, medical affairs must define and track multiple unique impact metrics de novo—and this is not an insignificant challenge.

Some organizations are investing heavily in sophisticated tools aimed at measuring impact with pinpoint accuracy. However, this pursuit often leads to an unintended consequence: greater investment in measurement infrastructure than in actual impact delivery. Rather than striving for an elusive "perfect" measurement system, a pragmatic and directional approach is needed. Too many organizations are seeking the 10-digit GPS coordinate, when a map and compass will suffice.
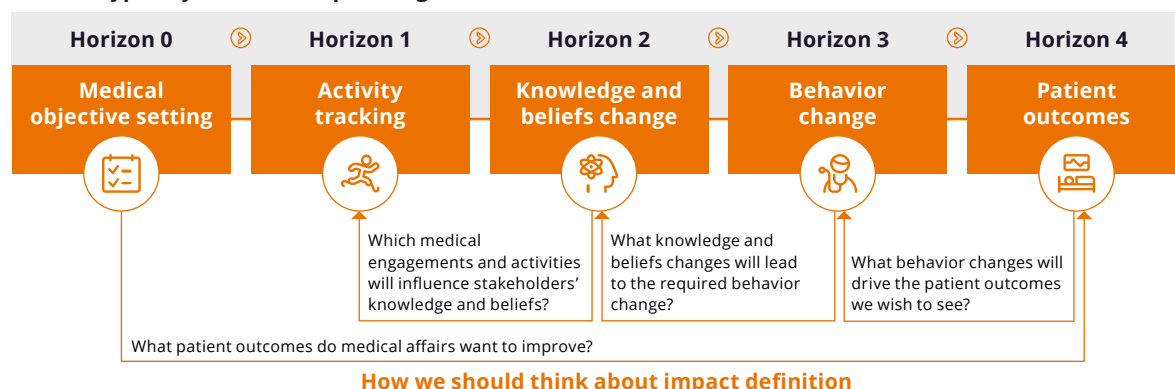
The Patient Outcomes Impact (POI™) Framework: A pragmatic measurement approach

To address these challenges, ZS has developed the medical affairs POI Framework, a structured yet flexible approach that integrates leading and lagging indicators to assess medical affairs' impact. This framework recognizes that impact unfolds across multiple "horizons." By systematically linking these horizons, organizations can make informed decisions and adjust their medical strategy and activities in real time.

FIGURE 3:

ZS medical affairs POI Framework

How we typically think about planning

Horizon 0	Horizon 1	Horizon 2	Horizon 3	Horizon 4
Medical objective setting	**Activity tracking**	**Knowledge and beliefs change**	**Behavior change**	**Patient outcomes**

Which medical engagements and activities will influence stakeholders' knowledge and beliefs?

What knowledge and beliefs changes will lead to the required behavior change?

What behavior changes will drive the patient outcomes we wish to see?

What patient outcomes do medical affairs want to improve?

How we should think about impact definition

The POI Framework begins with defining medical objectives (Horizon 0) that align with brand strategy, considering the unique role of medical affairs and the identification and quantification of unmet medical needs. Measurement plans must be designed at the strategy development stage to ensure clarity in tracking progress. While we will introduce Horizons 1-4 sequentially, medical affairs organizations should define impact by starting with the end in mind (Horizon 4). Begin with a clear vision of the patient outcome to impact, then work backwards, through Horizons 3, 2, and 1, to ensure that each step builds toward meaningful, measurable impact.

Activity tracking (Horizon 1) focuses solely on execution, capturing the plan's progress across relevant medical activities, including KOL engagements, evidence dissemination and scientific communication pull-through. This requires a reasonably robust approach to data collection to ensure that medical affairs activities are recorded and assessed holistically.

ZS estimates that 90% of medical affairs organizations are consistently tracking activity, often leveraging a customer relationship management (CRM) system. Execution against planned activities provides a strong leading indicator for medical impact. For example, if an organization plans to engage 100 priority KOLs, identified based on the patient outcomes to impact, but only reaches 50, it's unlikely to achieve its desired outcomes. However, strong

execution alone, such as engaging 90 KOLs, does not guarantee strategic success. True impact requires not only activity but also a meaningful connection to broader objectives.

Understanding and beliefs (Horizon 2) marks a shift from measuring internal activities to exploring external impact. The goal of medical engagement is to ensure scientific understanding among stakeholders. The measurement of knowledge and beliefs focuses on capturing changes in scientific knowledge, perceptions of disease and treatment paradigms, attitudes toward available therapies and alignment with the organization's scientific point of view. This level of impact measurement is primarily qualitative, relying on capturing structured and unstructured feedback from relevant external stakeholders.

ZS estimates ~50% of medical affairs organizations measure how external stakeholder knowledge and beliefs are changing. Organizations use a variety of methodologies to assess this impact, ranging from market research surveys to insights mining to social media analytics; nevertheless, few organizations measure knowledge and beliefs in a consistent, structured way.

And while measuring knowledge and beliefs shifts are important, medical affairs impact is most appreciated through behavior change (Horizon 3), which provides more tangible evidence of impact through changes in clinical practice. Structured analysis of real-world data, such as claims data, electronic health record data, registry data, etc., can provide insights into how medical interventions influence diagnosis and treatment patterns. Unlike earlier horizons, this stage is driven by quantitative analysis, offering tangible indications of medical affairs' contributions to healthcare advancements. ZS estimates that fewer than ~10% of medical affairs organizations routinely measure behavior change metrics today.

The ultimate objective, however, for all life sciences organizations is to improve patient outcomes (Horizon 4). Medical affairs organizations can leverage similar approaches and datasets to those used to measure impact in Horizon 3 (behavior change). In practice, measurement of patient outcomes (Horizon 4) poses an additional challenge: time. To observe changes in patient outcomes, organizations must take a long-term view; therefore, we recommend that, as medical affairs enters the third era, organizations reserve the Horizon 4 impact measurement for only the most vital of outcomes.

The primary guiding principles of the POI Framework include:

1. **Organizations should not limit impact measurement to any given horizon.** Instead, they must set medical objectives (Horizon 0) and should aim to measure at least across activity tracking, knowledge and beliefs change, behavior change and patient outcomes horizons to capture a more holistic view of medical affairs' impact.

2. **Horizon 4 metric(s) must be directly aligned with the defined medical objective(s) (Horizon 0).** For example, if the medical objective (Horizon 0) is to reduce the risk of recurrence in patient subgroup X by Y%, then the Horizon 4 metric should quantitatively reflect that goal, such as the percentage change in recurrence risk within patient subgroup X.

3. **Increased emphasis on behavior change (Horizon 3) metrics is the key to entering the third era.** By measuring how practice changes, medical can identify ways to influence these changes at scale. Horizon 3 metrics must be limited to the one to two most important outcomes medical aims to achieve. This rallies the medical team around moving the needle where it drives the most impact.

4. **The framework does not demand pinpoint precision**. While demonstrating a causal relationship between medical affairs and intended outcomes may be useful in certain circumstances, directionally understanding how medical affairs creates value to internal and external stakeholders is sufficient to inform adjustment to medical strategy.

Industry case studies and practical implementations

We recognize that many organizations measure across aspects of each horizon in the POI Framework. Yet, very few are tackling this holistically. To enable meaningful end-to-end impact measurement, organizations can learn from each other and draw from best practices established within each of the horizons. A few examples we can share:

Horizon 1 (activity tracking): A global pharmaceutical company sought to elevate its Horizon 1 activity tracking by shifting from basic execution metrics to a more outcomes-oriented approach. By aligning KPIs with strategic medical objectives, the organization developed a set of leading indicators to better demonstrate the value of medical affairs. This clear articulation of objectives also helped the compliance function validate the legitimate intent underpinning the KPIs tailored for medical. These metrics spanned core areas such as insights, evidence generation, medical communications and engagement, ensuring that activities were not only tracked but also linked to broader impact goals. This shift enabled more informed decision-making and the continuous refinement of strategic goals across therapeutic areas.

Horizon 2 (knowledge and beliefs change): Another global pharmaceutical company implemented an automated program to collect real-time feedback on HCP knowledge and perception on key scientific constructs, post-field interactions. Traditional survey methods yielded response rates of less than 3%, whereas engagement through medical science liaison (MSLs) resulted in a response rate exceeding 30%, significantly improving the organization's ability to assess medical affairs' effectiveness. This program was subsequently scaled across all therapy areas.

Horizon 3 (behavior change): One organization sought to understand whether MSL engagement with HCPs led to differences in adoption of long-acting medications at a class level. They not only were able to explore the impact of engagement but also derive nuanced insights on how the frequency of interaction impacted the extent of practice change. Ultimately, this organization had the ability to leverage their understanding of their uniquely identified behavioral change metric to inform MSL sizing, structure and workload allocation.

Horizon 4 (patient outcomes): Another company leveraged AI-driven analysis to establish a baseline for care gaps in non-small cell lung cancer. By integrating machine learning models with real-world data, the organization identified gaps in clinical care and devised targeted interventions to optimize patient outcomes. This data-driven approach enabled a more strategic allocation of medical affairs resources.

Entering medical affairs' third era: A call to action

As medical affairs navigates its entry into the third era, organizations must embrace a pragmatic measurement philosophy that prioritizes directional insights over unattainable precision. An adaptive framework like the POI Framework allows for a structured yet flexible approach to impact measurement, ensuring that medical affairs remains agile in a rapidly evolving healthcare landscape.

To accelerate progress, organizations should:

Define clear and measurable strategic medical objectives (Horizon 0). Ensure the objectives are aligned with broader business goals and focused on tangible and measurable outcomes.

Identify appropriate metrics for each horizon. Start with the end in mind (Horizons 4 and 3); identify the outcomes and behavioral-changes you wish to see across patient outcomes and behavior change horizons. Identify one to two metrics that would demonstrate the impact that the medical affairs organization has delivered. Then move to Horizon 2 (knowledge and beliefs) and identify what external stakeholders need to know and believe to drive the behavior changes. And finally, define the activities that are necessary to drive those changes (activity tracking, Horizon 1). This allows us to holistically measure progress toward strategic priorities and triangulate across different channels.

Establish effective measurement methodologies by determining:

- How to best collect and analyze data

- What tools and platforms to leverage

- How frequently metrics should be reviewed to inform decision-making

Evolve an MBR process that features cross-horizon impact assessment. Use results to understand what elements of medical strategy should be untouched and what aspects should be adjusted. Impact assessment should provide learnings to inform and optimize medical strategic priorities.

By integrating both qualitative and quantitative impact insights, organizations can develop a comprehensive understanding of medical affairs' impact. They can regularly refine strategy in alignment with scientific advancements and evolving healthcare dynamics, always with the intention to better improve the health of the people they serve. Measuring impact is not about perfection or about measuring solely to showcase internal value; rather, it is about equipping medical affairs with the insights needed to navigate complexity and drive meaningful change. Those who adopt a dynamic, data-driven approach will be best positioned to thrive in this new third era of medical affairs.

About the authors

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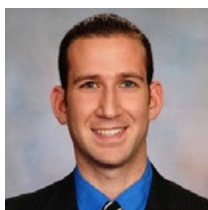
Remy Friedman, MD is a manager at ZS leading the firm's Patient Outcomes Impact (POI™) Metrics capability. Beyond his interests in medical affairs impact measurement, Remy drives strategic value for pharmaceutical clients through brand and portfolio life cycle management strategy development, integrated evidence planning and actionable insight generation.

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