

The Value and Impact of Medical Affairs: Mastering the Art of Leveraging Meaningful Metrics

Becky Harmon, Senior Advisor/COO–Diabetes
Development, Eli Lilly and Company,

Paul Tebbey, PhD, MBA, Vice President US Medical
Affairs Biosimilars, Fresenius Kabi USA

Anna Walz, Chief Executive Officer, MedEvolve

Leah Williams, MSc, Director, Medical Education &
Communications, Hematology TA, CSL Behring



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INTRODUCTION

Metrics drive the biopharmaceutical and MedTech industries, whether it's business metrics associated with sales and market share or research metrics including the number of investigational agents in phase 2 trials.¹ Across the organization, metrics power actions and demonstrate value. However, it is specifically the independence from traditional metrics tied to financial return on investment that creates the credibility and thus the impact of the Medical Affairs (MA) function. The question becomes this: If not these financially driven metrics, then what? Lack of a definitive answer to this question means that in most MA teams, the use of metrics remains limited. Current, primarily quantitative metrics often do not demonstrate the depth and breadth of the work that MA teams do and how MA impacts the company; or these metrics are not used to progress the MA Strategic Plan. In short, while many MA teams are using metrics at a tactical level, they are not using metrics in meaningful ways that facilitate learning from prior actions and refinement to the strategic approach. Thus, coincident with the emergence of MA in prominent leadership roles within organizations, optimizing the use of metrics is imperative.^{2,3} The purpose of this paper is to describe the elements of meaningful metrics in MA and demonstrate how these metrics can be used to facilitate real actions and outcomes for MA teams and the organization as a whole.



METRICS IN MEDICAL AFFAIRS

Though much has been written describing the evolving uses of metrics in MA,¹⁴⁻⁹ there remains little consensus on best practices across organizations. Results from a small pilot survey of MAPS members (n = 25) reinforces this idea of fragmented metrics use, with 44% of respondents reporting that they either do not use metrics or are unaware of the use of metrics in their MA teams. Additionally, 64% of survey respondents either do not develop metrics or are unaware of metrics at the initiation of a strategy or tactic, and only 40% of respondents categorize the organization's current metrics as useful (Figure 1). The survey also asked MAPS members to report which metrics are currently used (Figure 2). Notably, current metrics tend to be more quantitative, focusing on the number or volume of actions taken, for example, the number of medical science liaison (MSL)/key opinion leader (KOL) interactions per quarter, without necessarily taking into account the impact of these actions. When metrics are poorly integrated across the function or organization and when these metrics have magnitude but no direction, MA teams run the risk of measurement without meaning. Consequently, there is a missed opportunity for MA teams to differentiate what has been working vs what has not and thus to better refine future strategies and initiatives.



Figure 1. The Use and Usefulness of Metrics in Medical Affairs



Figure 2. Types of Metrics Currently Used in Medical Affairs

WHAT IS A MEANINGFUL METRIC?

A meaningful metric details how closely a tactic or initiative delivers on its purpose as described in the Medical Affairs Strategic Plan. This alignment between a tactic and the metric(s) used to assess it in turn provides actionable insights, helping teams identify and communicate the impact of successful actions to the MA or cross-functional product team, while also offering the opportunity to rethink and reprioritize efforts shown to be less successful. These metrics capture not only that something has been done but also its effect. For example, metrics associated with data generation or communication may inform regulatory, reimbursement, and global market access requirements.¹⁰ A meaningful metric goes beyond the one-dimensional scalar measurement of magnitude alone (eg, the number of symposium attendees) and reflects the multidimensional value of a vector measurement that contains direction as well as magnitude (eg, the pre- and post-symposium assessment of knowledge acquisition of the attendees or post-symposium follow-up/educational opportunities with MSLs). Thus, the more meaningful metric measures the educational progress of all attendees aligned to the current medical objectives and scientific messages. It has value in driving updated strategy or actions of the teams making up MA and also organizational value in demonstrating the value/impact of the MA function as a whole.

THE ART OF MEANINGFUL METRICS

The successful use of metrics in MA can be seen as 2 related challenges: how to use metrics and which metrics to use. Answering the first challenge starts by defining metrics as part of the Strategic Plan, thus ensuring that the use of metrics remains aligned to the overall Medical strategy. Top-line metrics within the Medical strategy are those that apply across functional groups within the MA team, providing one foundational assessment for the team to determine whether they have met the strategic objectives outlined in the strategy. Of course, groups within MA will then utilize their own impact metrics at a tactical level to optimize work or refine plans. This allows all MA team members to work toward common objectives while personalizing the actions within their individual plans that help to achieve these objectives. These ongoing assessments and evaluations influence updates to the Strategic Plan such that the use of meaningful metrics supports the ongoing evolution of the plan as a living and breathing document. This concept of metrics as an element in a cyclical process of planning, implementation, and evaluation is important for any stage of a product life cycle but especially in the peri-launch period wherein the impact of medical strategy should be reexamined at frequent intervals to account for new data and changing treatment paradigms.¹⁰

During the launch planning process, a Medical Affairs team chose a strategy of key opinion leader (KOL) educational scientific congresses to educate stakeholders about the organization's new pharmaceutical product. As a success metric, the team chose to count the number of abstracts accepted at a large annual conference and compare the results with the number of competitors' abstracts accepted. The team was able to place 17 abstracts at this conference, which was greater than results from the majority of competitors. However, this metric did nothing to inform the team whether the content of these abstracts met the goal of KOL education. In this case, the metric measured the scale of actions taken but did nothing to inform progress toward the goal identified in the Strategic Plan. In many ways, this was a meaningless metric.

A Medical Affairs team undertook the strategic planning process, defining the goal of product adoption and a strategy of external education to promote this goal. The team also defined metrics to measure the content and results of medical science liaison (MSL)/KOL interactions. Through these metrics, the team found that the organization's MSLs were spending significant time describing the drug's interesting mechanism of action, but the organizational value was in communicating health economics and outcomes research (HEOR) to describe which patient should get the product at which time—which drove adoption. By measuring against the Strategic Plan, the team was able to shift its efforts. This case shows that in addition to demonstrating the impact of Medical Affairs to internal stakeholders, metrics may be used to drive the external actions of Medical Affairs.

Figure 3. Narratives Illustrating Meaningful and Meaningless Metrics

Within this framework of use are the metrics themselves. The list of possible metrics is long and ever-expanding, especially in the digital age (Figure 4), highlighting the need not only to choose from the existing list but to understand the factors that make metrics meaningful within the context of a team's specific strategies and tactical plans. With that goal in mind, this paper offers the following ideas for use in conceptualizing metrics to support a team's individual needs.



Figure 4. Metrics Commonly Used in Medical Affairs^{2,4,7,8,10}
KOL indicates key opinion leader; MSL, medical science liaison.

- **Qualitative vs Quantitative**

A central challenge in the use of metrics in MA is quantifying outcomes that are inherently qualitative, such as stakeholder education or customer awareness of product messages. Unfortunately, it can be difficult to calculate and communicate the success of initiatives measured with qualitative metrics (eg, the value of insights gained across customer channels). Historically, this problem was addressed by focusing on quantitative measurements as proxies for desired outcomes, for example, the number of KOL interactions as proxy for the success of a team's external engagement strategy. Current strategies seek to both formalize qualitative metrics and quantify the impact of MA actions. This concept of impact measurement can be understood as looking a layer deeper than traditional quantitative metrics to ask not only “What was done?” but “What was the impact of what was done?”

- **Scalar vs Vector**

Related to the previous discussion of qualitative vs quantitative metrics, scalar metrics show size, whereas vector metrics show both size and direction. For example, measuring the annual number of publications or KOL interactions are scalar metrics demonstrating the quantity of actions but not their impact. Capturing the impact of a publication (eg, through altmetrics) or the depth of KOL interactions (eg, through qualitative survey) could help transform these scalar metrics into vector metrics.

- **Organizational vs Strategic**

Where does a metric sit in the hierarchy of the MA Strategic Plan? For example, top-line goals like increased adoption of a product might sit at the organizational level, while the different groups within MA including Publications, Field Medical, and Health Economics and Outcomes Research (HEOR) may each use strategic metrics to support adoption of that product through initiatives such as guideline inclusion, key data dissemination, or medical education.

- **Reach, Relevance, and Resonance**

Reach, relevance, and resonance combine a KOL's reach with their relevance to the target market to predict their resonance. This can be seen as combining scalar and vector metrics such that how many times something is accomplished is multiplied by the impact of each iteration to determine an overall measure of success. For example, if this concept is applied to MA, a KOL with a significant publication history in neurology may have impressive reach, but if the Medical group is focused on oncology, the KOL may have little relevance, decreasing this KOL's resonance in the oncology space.

- **Value vs Impact**

MA teams often speak of metrics to demonstrate the “value” of the function. As MA evolves into increased prominence within the organization, it has the opportunity to shift from the language of justifying value to demonstrating impact, thereby shifting from a deficit perspective (“Is MA really worth it?”) to an asset perspective (“What opportunities does MA present?”). This shift can also influence the design of an MA team's metrics framework, with teams focusing on metrics to drive opportunity and innovation rather than metrics meant to justify value.

- **Can vs Should**

Eventually a strategic planning process with metrics at its core will generate more metrics than are feasible to implement. Keep in mind that every measurement comes with an associated cost not only in time and budgetary resources but in the danger that less useful metrics may obscure the learnings from more central and essential metrics. Just because something can be measured does not mean that it should be measured. Likewise, the choice to measure assigns value to the actions or outcomes being measured, meaning that metrics have the potential to incentivize behaviors, and it becomes essential to consider whether a specific metric may unintentionally incentivize negative actions.

- **Measuring vs Monitoring**

Some metrics require no context—they stand alone as absolute measures. However, many metrics are only relevant as measures of change. This latter category of monitoring metrics can show a group or organization whether it is moving toward or away from its goals. Measuring and monitoring metrics can be cyclical and even periodic, with feedback from monitoring influencing the next iteration of metrics designed to measure outcomes. However, monitoring metrics present special challenges in implementation and interpretation. Who will do the measuring and how often? What types or magnitudes of changes over time are meaningful, and what actions should be taken based on these changes? Does a baseline exist against which to compare current and future measurements and, if not, how will baselines be established and at what point will the metric return meaningful insights? These questions must be answered in the Strategic Plan.

- **Internal vs External**

Internal metrics demonstrate impact to other stakeholders within the organization and must be designed from the perspectives of these stakeholders; for example, Commercial may prioritize reporting on HEOR value, whereas Research & Development may prefer insights generated by MA leading to additional clinical studies. External metrics describe MA's impact on stakeholders outside the organization and are likewise designed from the audience's perspective, for example, measuring the increase in knowledge in a patient advocacy community around the effectiveness of investigational agents due to an MA external education program. When aligning metrics with the Strategic Plan, it is useful to keep these internal and external audiences in mind so that MA can choose metrics to match motivations of various internal and external audiences.

LEVERAGING METRICS TO IMPROVE OUTCOMES IN MA

The right to define strategies comes with the responsibility to measure results. In this way, solving the challenge of metrics is an essential step toward the progression of MA to function as a strategic partner and leader within the highest echelons of the organization. To achieve such, these metrics must have meaning, they must align with the Strategic Plan, and they must measure impact and influence future decision-making and outcomes. By becoming familiar not only with the menu of currently available metrics but also with the factors used to evaluate the design and purpose of metrics, an MA team can continue to evolve toward its strategic potential.

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