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From the Clinic to the Collaboration Table: A Primary Care KOL's Perspective on Elevating MSL Engagement to Improve Patient Outcomes

Orchestrating Influence: Mastering Omnichannel Engagement in the Era of the Digital Opinion Leader

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Letter from Editor

By Cherie Hyder, PharmD, MSL-BC | Summer 2025

Dear Readers:

Thank you for your steadfast connection to your professional Medical Affairs community through reading, supporting, and contributing to The MSL Journal. Your investment in learning, growing, and developing, as well as giving back to others through sharing your articles, makes this publication so valuable in an era where showing value is vital now more than ever!

I want to take a moment to explore and underscore how important it is to have a strong sense of purpose in what we do each day, as this purpose propels us to bring elevated value demonstration. We know how important it is to demonstrate value, and at times, long work days may drain our energy as we push harder each day to stay focused, relevant, and impactful. If you ever doubt your worth or feel drained, it is important to pause and ensure you give yourself credit for all you do. Take time to consider how your purpose connects to the work you do each day.

Oftentimes, we get so busy that we lose sight of shifting strategic imperatives and the need to stay aligned with the business focus. After all, much planning goes into our efforts, and it may take months or more to begin to see the full effect of the work we are doing in the field. Connecting your strong sense of purpose in work requires aligning to medical strategy, ensuring tasks are in sync with your core values, establishing meaningful goals, and knowing how your work contributes to organizational value and impact.

Some ways you can keep your beacon of light focused on purpose that propels you forward (and does not paralyze or overwhelm you) include:

1. Take time to understand your values and how they align with work initiatives. Reflect on what truly matters to you and what you aim to deliver; what work and results bring a spark of joy and fulfillment that recharges your battery for the next big lift! Be intentional about the work you choose to do and how you prioritize activities. If misalignment in your current role persists, it may be time to move on to something new and invigorating! There is such a variety of roles in Medical Affairs today!
2. Take time to set meaningful goals and be laser-focused on how your actions lead to impact. Don't just focus on achieving targets, but rather set goals that resonate with your values and contribute to the larger organizational needs. Seek to understand how your efforts connect with and impact others around you, which elevates meaning and motivation. Celebrate achievements, whether small or large, that align with your purpose – your WHY – in terms of what you do and how it makes a difference.
3. Take time to foster an environment that is supportive by talking with others about your plans, goals, and how you believe your efforts will deliver value. In talking with others, we learn more about the interconnectedness of our own work and how what we do matters to others. Reach out to others on your team – both MSLs, leaders, and cross-functional stakeholders and engage them regularly, building positive relationships and a sense of belonging. These connections also foster growth and learning about others' roles, goals, and work.
4. Take time to reflect and adapt your plans. Assess whether your plans and efforts continue to align with medical strategy and your purpose. Make adjustments intentionally and lean into change; change is not the enemy. In fact, change brings opportunities, builds your flexible, nimble attitude, and helps others see change in a positive light. Embrace challenges and even setbacks because we learn more and grow in these times. It is an opportunity to refine and redefine our sense of purpose.

To sum it all up: Purpose is not just doing work or checking items off our to-do list. It is about finding true meaning and the spirit of connection to what we do that drives us forward. The benefits of a strong sense of purpose include being more motivated, engaged, and productive. We are more likely to achieve the things we aim for and deliver value when we feel the purpose in our work. The MSL Society is your place to connect with peers and leaders in Medical Affairs. If you are looking for a stronger purpose in what you do each day, reach out to your community, get involved in mentorship, and share your ideas through writing articles. Take an active role in your profession.

As many prepare for summer vacations, it is a worthwhile time to take a break, perhaps on a beach chair or hammock, to reflect on how your sense of purpose helps you deliver value and areas where you need support. I hope these tips help guide you towards your purpose and elevate impact in all you are doing!

Enjoy the array of topics in this issue of the journal, and I hope you find pearls that strengthen your purpose through the variety

of topics, from career development to strategic focus, use of technology and AI to enhance efficiency, and digging deeper into KPIs and value demonstration. This edition of the journal has something for everyone!

Cheers and happy reading in the summer sun!

Cherie Hyder

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Cherie Hyder, PharmD, MSL-BC

Is Medical Affairs About to Become Obsolete as a Result of AI?

By Samuel Dyer, MD, PhD | Summer 2025

Within the pharmaceutical industry, the Medical Affairs department serves a critical strategic function as a link between internal scientific innovation and external clinical engagement. Some of these critical functions include data dissemination, evidence generation, KOL relationship management, and insight analysis. The department has been crucial in translating science into real-world impact. However, artificial intelligence (AI), particularly generative AI platforms like ChatGPT, Grok, Claude, and other large language models, is rapidly transforming how value is delivered. As a result, the structure, functions, and long-term relevance of Medical Affairs are being reevaluated.

This transformation isn't just hypothetical; its effects are already being observed. The implications for those working in Medical Affairs and the pharmaceutical industry overall are profound!

Due to growing concern and the momentum of AI adoption, the Medical Science Liaison Society conducted the first-ever global survey on the use of AI in Medical Affairs in 2024 and published the results (1).

However, as AI adoption has expanded, so has the urgency to understand its broader implications and impact on the careers of those working in Medical Affairs. To understand this impact, three additional global survey questions were conducted via LinkedIn polls in May and June 2025**,** targeting those working in Medical Affairs worldwide:

1. As a result of AI advancements, which role in Medical Affairs will most likely be significantly reduced over the next few years?
2. Will the number of Medical Affairs leadership roles (e.g., Directors, VPs) be significantly reduced in the next few years as a result of AI?
3. Compared to previous job searches, how difficult is it to find your next role in Medical Affairs?

Which Medical Affairs Roles Are Most Vulnerable to AI?

AI is already transforming internal Medical Affairs functions. From automating literature reviews and creating medical content to streamlining medical information responses and analyzing insights, AI enables faster, more scalable, and often more accurate execution of many traditional activities. As these capabilities expand, the need for human involvement in routine and data-driven tasks continues to decline.

Table 1: As a result of AI advancements, which role in Medical Affairs will most likely be significantly reduced over the next few years?

Role	Percentage
Leadership Roles (Director/VPs)	2%
Medical Information	72%
MSLs/Medical Advisors	6%
No roles significantly reduced	20%
N = 806	

An overwhelming 72% of respondents selected Medical Information as the role most likely to be significantly reduced. This aligns with the rise of AI tools that can search, synthesize, and respond with high accuracy and speed. These are processes that were once human-intensive but are now increasingly managed by AI, reducing the need for large internal teams.

Only 6% indicated MSLs or Medical Advisors will be significantly affected, suggesting that functions involving complex interpersonal **engagement, nuanced scientific exchange, and contextual decision-making are perceived as less susceptible to automation.**

Interestingly, 20% of respondents selected “No roles significantly reduced,” which raises important questions. Does this indicate a lack of awareness about AI’s capabilities and potential impact? Or possibly an overestimation of the irreplaceability of current functions? Could it also indicate resistance to change or a belief that Medical Affairs will be insulated from broader industry disruption? Regardless, this data suggests that some in Medical Affairs might underestimate the extent of disruption that is likely to happen and the urgent need to adapt.

Will the Number of Medical Affairs Leadership Roles Be Reduced as a Result of AI?

AI is transforming not just daily activities but also organizational structures. As advanced tools support strategic decision-making, medical content review, insight analysis, and cross-functional alignment, many companies are rethinking the number of leadership layers needed in Medical Affairs.

This is especially relevant for roles such as:

- Directors of Medical Affairs
- Senior Directors
- Executive Directors
- Vice Presidents and above

With average U.S. salaries for Medical Affairs leadership roles often exceeding $350,000, the financial incentive to streamline is significant (2). AI has started to replace some of the typical activities these positions traditionally have been responsible for, decreasing the need for multiple layers of management (1). Some organizations are no longer just asking what AI can do; they are asking who AI might eventually displace (1).

Table 2: Will the number of Medical Affairs leadership roles (e.g., Directors, VPs) be significantly reduced in the next few years as a result of AI?

Response	Percentage
YES – MAJOR reduction in numbers	16%
YES – MINOR reduction in numbers	39%
NO – numbers remain the same	45%
N = 520	

A combined 55% of those working in Medical Affairs anticipate reductions in the number of Medical Affairs leadership roles, with 16% predicting a *major* reduction and 39% expecting a minor reduction. As AI continues to support strategic decision-making,

insight analysis, and content review, many traditional leadership functions may no longer be necessary.

Interestingly, 45% indicated that the number of leadership roles will remain the same. While this may demonstrate confidence in the perceived value of leadership, similar to the previous question, it also suggests that a portion of the Medical Affairs community could be underestimating the amount of disruption that may occur and the impact of AI.

Is AI Making It Harder to Land Your Next Medical Affairs Role?

AI is not only transforming how Medical Affairs departments function but also reshaping the job market for those working in Medical Affairs. As companies increasingly automate tasks and redefine role expectations, applicants will likely encounter a more competitive hiring environment.

Table 3: Compared to previous job searches, how difficult is it to find your next role in Medical Affairs?

Response	Percentage
More Difficult: AI adoption	22%
More Difficult: other reasons	47%
No Change	24%
Less Difficult	7%
N = 136	

The data clearly demonstrates that it has become more difficult to find new roles. Overall, 69% of respondents report greater difficulty finding new positions, with 22% specifically citing AI as a factor. As typical activities become automated and strategic activities are increasingly supported by technology, the number of available roles may decline, and competition for remaining positions will likely intensify. The data indicates that AI is being perceived as already impacting the hiring dynamics across the Medical Affairs job market.

What Technology Leaders Are Warning Us About

These challenges are not unique to Medical Affairs. They reflect a much broader and accelerating trend across various industries, especially in white-collar, knowledge-based professions. Numerous technology and business leaders have recently issued stark warnings that are highly relevant to anyone in Medical Affairs, particularly those in roles that rely heavily on strategic planning, content development, or data synthesis.

Eric Schmidt, former CEO of Google, recently stated: “If you’re an artist, a teacher, a physician, a businessperson, a technical person, if you’re not using this technology, you’re not going to be relevant compared to your peer groups and your competitors and the people who want to be successful. Adopt it, and adopt it fast (2).”

Jim Farley, CEO of Ford, issued a stark prediction: “Artificial intelligence is going to replace literally half of all white-collar workers in the U.S. (3).”

Sam Altman, CEO of OpenAI (ChatGPT), stated that AI is now capable of performing tasks “typically expected of the smartest grads with a doctorate (4).”

Dario Amodei, CEO of Anthropic, warned that “AI could wipe out half of all entry-level white-collar jobs and spike unemployment to 10 to 20% in the next one to five years (5).”

What Medical Affairs Must Do Now

These statements highlight the urgency for those working in Medical Affairs to adapt. Roles involving data interpretation, scientific content development, internal workflow management, or operational strategy oversight are at high risk of being redefined or replaced. The implications are clear: ignoring AI is not an option.

The expected dramatic disruption across various industries and professions due to the expanding capabilities of AI seems inevitable. For those working in Medical Affairs to remain relevant and continue to deliver strategic value, they must proactively engage with emerging technologies, develop new skills, and emphasize what AI cannot duplicate: human insight, clinical empathy, contextual judgment, authenticity, emotional intelligence, and trusted relationships with KOLs.

While the function of Medical Affairs will remain essential, the number of positions needed to fulfill various responsibilities will likely decrease. Those who want to stay relevant must embrace adaptability, continuous learning, and a willingness to lead through this unprecedented change.

Medical Affairs is not obsolete, but it is being redefined. The time to adapt is now!

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Dr. Samuel Dyer is the CEO of the Medical Science Liaison Society and has over 25 years of international MSL experience. During his career, he has managed MSL teams and operations in over sixty countries across the United States, Canada, Europe, Africa, the Middle East, Australia, and New Zealand. He has facilitated the successful launch of pharmaceutical and medical device products for both Fortune 500 pharmaceutical companies and small biotechnology companies.

Dr. Dyer has coached, interviewed, and reviewed the CVs of countless aspiring MSLs. His insights and guidance have resulted in hundreds of aspiring MSLs successfully breaking into their first roles.

While leading the MSL Society, he has conducted MSL training programs for over 75 pharmaceutical, biotechnology, and medical device companies in more than 15 countries. Dr. Dyer has also written extensively on the Medical Science Liaison profession, including numerous published articles, benchmark studies, and reports. He has been the keynote speaker and moderated

numerous international conferences on various MSL–related topics, including creating teams, management, MSL training, proper utilization of MSLs, global trends, and the KPIs and metrics used to measure MSL performance. Dr. Dyer has also served as a resource and consultant on several MSL–related projects for several organizations, including McKinsey & Company and Bain & Company.

Dr. Dyer has an MD from Washington University (Health & Science) School of Medicine, a PhD in Health Sciences from Touro University, a Master's degree in Tropical Biology (where he studied in the Amazon) from Southern Illinois University Edwardsville, and a Bachelor's degree in Biology from the University of the State of New York. Dr. Dyer also completed a certificate program for Executive Leadership and Strategy in Pharmaceuticals and Biotechnology at the Harvard Business School.

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The book is the first and only step-by-step guide on how to break into the MSL profession and it has received multiple prestigious awards, including:

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- 2024 "Gold Award" Winner – Literary Titan Book Awards in the Career category.
- 2023 "Best Book" Winner – Pinnacle Book Achievement Award in the Career Development category.

He is also the author of the *Medical Science Liaison Job Application Tracking & Interview Self-Evaluation Journal* (https://amzn.to/49n6MGR).

Exploring the Value of Wilderness Medicine Training for Medical Affairs Professionals

By Samuel Dyer, MD, PhD | Summer 2025

An Interview with Dr. Richard Ingebretsen, Program Director, University of Utah School of Medicine

Each summer, an exceptional program is conducted by the University of Utah School of Medicine in Chamonix, in the heart of the French Alps, an intensive two-week Wilderness Medicine and Rescue course that combines classroom instruction with field-based medical training. Designed for medical students, residents, healthcare professionals, and undergraduate students, the program blends intensive lectures with practical hands-on field simulations in challenging alpine environments. Last year, I had the privilege of participating in the program as a student, where it served as my final clinical rotation prior to graduating from medical school. This year, I returned as both a physician and an instructor, leading numerous field-based medical exercises and a few lectures. The 2025 program included approximately 40 medical students and residents, along with over 60 undergraduate students. The experience was both inspiring and enlightening, reinforcing the relevance of wilderness medicine not only for clinicians but for those in Medical Affairs, including Medical Science Liaisons (MSLs).

To better understand how this unique program benefits not just physicians-in-training but also those working in Medical Affairs roles, I interviewed **Dr. Richard Ingebretsen**, the visionary program creator and director behind the Wilderness Medicine curriculum at the University of Utah School of Medicine.

Interview Questions:

1. **Dr. Ingebretsen, the Wilderness Medicine program has gained international recognition for its immersive and rigorous structure. For those in Medical Affairs (i.e., Medical Science Liaisons, medical affairs leaders, etc.), what unique skills or perspectives does this program cultivate that could be applied to their roles in industry?**

As more people venture into the backcountry, injuries are increasing. There has never been a branch of medicine devoted to teaching medical professionals how to treat or prevent such injuries. Wilderness medicine encompasses the prevention, diagnosis, and treatment of injuries and medical conditions that may occur during activities in remote territories away from cities, ambulances, and hospitals. It covers how to practice medicine where there is no medical support and where a person

might have to improvise care

2. **Many MSLs and Medical Affairs professionals are required to navigate dynamic, high-pressure environments where clinical decision-making, scientific communication, and adaptability are key. How does wilderness medicine training mirror or enhance those core competencies?**

They are almost identical. Being in an austere environment required ingenuity and adaptability as much as anything else. Clinical decisions must be made without the benefit of obtaining data with instruments, so the clinician must use their intuition and minds. This is rough for those who rely on computers and instruments, so wilderness medicine pushes people to test themselves.

3. **This year's program included both foundational lectures and extensive field simulations ranging from high-altitude medical emergencies to remote rescue coordination. How do you envision these experiences shaping the confidence, leadership, and communication styles of professionals working outside traditional clinical settings?**

We tend to rely on others when a situation becomes tense, urgent, or emergent. Decisions in these situations can be extreme. One of the best ideas taught in wilderness medicine is self-reliance and the ability to make medical decisions where a person must rely on their own minds and thoughts. In the wilderness, decisions must be made quickly with little data and without the backup of an ambulance or traditional medical care.

4. **From your perspective, why might a non-traditional participant—such as someone in a scientific engagement or medical education role within pharma—benefit from attending a program typically aimed at clinicians and students?**

Wilderness medicine is for everyone who ventures into the backcountry. It is not just for people with a medical background. Most people go outside into the woods to hike. Others swim, ski, or run along a trail. If a medical issue arises, they cannot call 911. They must rely on skills learned in a wilderness medicine course.

5. **Over the last several years, have you seen an increase in participation from non-traditional or non-clinical medical professionals—such as those working in the pharmaceutical industry or Medical Affairs—and if so, what do you think is driving their interest in the program?**

This is simple: People go outside. They get sick, injured, or experience some other calamity. People want to know what to do.

About the author:

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He is also the author of the *Medical Science Liaison Job Application Tracking & Interview Self-Evaluation Journal* (https://amzn.to/49n6MGR).

From Closing Deals to Closing Knowledge Gaps: Transitioning from Sales to MSL

By Héctor López | Summer 2025

Introduction and objectives

The Medical Science Liaison (MSL) role is increasingly recognized as a cornerstone of the pharmaceutical industry, offering professionals a dynamic opportunity to contribute to scientific development while fostering strong collaborations with healthcare practitioners. As the demand for MSLs continues to grow, understanding the pathways that lead to this profession, as well as the skills required, is essential for those seeking to enter the field.

The main objective of this study is to extend the analysis from the first article, *"Beyond the Brand: How Marketing Professionals Transition into the MSL Role"*, by examining how professionals navigate the transition from a previous role in the Sales department to becoming an MSL. The findings aim to highlight the key factors influencing success in the role and provide insights into effective career development pathways.

Methods

The research methodology for this article was already described in the previous publication *"Beyond the Brand: How Marketing Professionals Transition into the MSL Role".* Shortly, the project consisted of reaching out to and interviewing active MSLs who were previously sales representatives, brand or project managers, and some with mixed profiles, who had transitioned through both departments. All participants were asked demographic and general questions, regardless of their professional background in Marketing or Sales departments. For this article, MSLs who were previously sales representatives were interviewed for a more detailed section focused on their change to an MSL position.

Results & Discussion

In the previous article, "*Beyond the Brand: How Marketing Professionals Transition into the MSL Role*", eleven MSLs distributed throughout Spain were interviewed. Of the 11 people interviewed, 2 were previously product or brand managers, 6 were previously sales representatives, and 3 had a mixed profile since they had experience in both roles before changing their career path to an MSL position. The mixed profiles were interviewed for both profile-specific blocks of questions within the questionnaire. Therefore, in total, 5 questionnaire answers were collected for the profile "From Marketing to MSL" and 9 for the profile "From Sales Representative to MSL".

All interviewees had a university degree in Life Sciences, with the majority also holding a master's degree (MSc) (45%), or a MSc and an MBA (36%). None of the interviewees reported holding a PhD. In terms of professional experience, most participants (45%) had between 5 and 10 years of experience in the pharmaceutical industry, primarily in multinational pharmaceutical companies specializing in prescription medicines. Regarding the median time, the interviewees had spent 6 years in their previous roles before becoming an MSL, while their time as MSLs ranged from 1 to 7 years.

As further detailed in the first article, " *Beyond the Brand: How Marketing Professionals Transition into the MSL Role*," most of the participants indicated that they had always wanted to become MSLs. The main reasons for pursuing the MSL role included a strong scientific calling, an interest in scientific communication, and the desire to make an impact on patient care, as well as opportunities for continuous learning and professional development. Many saw the transition as a chance to face new challenges and stay updated with scientific advancements. Regarding their expectations about the role, some interviewees found that their expectations were exceeded, while others discovered that it was somewhat different from what they had initially envisioned. Many challenges were mentioned, such as project management, in-depth knowledge of medical topics and clinical trials, and territory management. In terms of skills, participants identified the need to further develop key competencies, including planning, active listening, flexibility, and scientific communication. Managing time and balancing professional and personal life were key reasons why planning skills were considered the most crucial for the role.

Sales questions

In this section, nine individuals who are currently MSLs and previously worked as sales representatives were interviewed. They responded to a total of five open-ended questions:

What was your main challenge in transitioning to the MSL role from the sales department?

The transition from a Sales Representative to a Medical Science Liaison involves a significant shift in responsibilities and working methodology. Based on the interviews conducted, several key challenges were identified during this process.

The level of scientific knowledge and expertise required in a product, pathology, or therapeutic area is the most critical factor in this transition. While working as Sales Representatives, they could rely on the MSL or Medical Advisor to clarify doubts. Now, however, they must lead scientific discussions with confidence. This requires more intensive study and continuous updates, particularly in complex and fast-evolving fields such as oncology. Although this factor was identified as a challenge by up to six interviewees (66.7%), several participants stated that they embraced this challenge with enthusiasm.

Another commonly mentioned challenge (33.3% of interviewees) was adapting their interactions with Key Opinion Leaders (KOLs) and the transition to a purely educational approach during medical calls. Interviewees noted that while in sales, interactions with physicians were product-promotion oriented, the focus in medical affairs is different: it requires a deep understanding of the drivers influencing clinical decision-making, the development of educational programs, and raising awareness about the pathology. Scientific communication takes center stage, and demonstrating the ability to convey knowledge accurately becomes a personal challenge for many during this transition, despite being accustomed to speaking in front of large audiences. Additionally, two interviewees faced biases from their colleagues within the medical affairs department, who initially perceived them as having a commercial mindset. Interestingly, this internal validation and empowerment process within their new role proved to be a greater challenge than gaining external acceptance from healthcare professionals.

Furthermore, regarding the previously mentioned aspect of drivers, in a minority (11.1%), it was described the need to become proficient with more detailed analytical tools and software for segmenting healthcare professionals as a technical learning curve, adding an extra layer of complexity.

On the other hand, approximately one-fifth of interviewees (22.2%) identified call planning as an area for improvement, both externally, referring to visits with physicians, and internally, regarding company meetings. Unlike the commercial dynamic, where schedules are more flexible and allow or look for a higher volume of interactions with healthcare professionals, the MSL role generally requires pre-scheduled calls, coordinated based on the availability of KOLs. This difference in time management

also extends to territorial scope: while Sales Representatives typically conduct a high number of visits within a broad area, MSLs are often responsible for even larger territories.

What strategies have you been able to apply in your MSL role to strengthen relationships with physicians and other healthcare professionals? What sales-acquired skills do you consider the most valuable in your new role as an MSL?

Despite the challenges previously outlined, the transition from a Sales Representative to an MSL does not involve a complete change in skill sets, but rather the application and refinement of previously acquired skills in a different setting. Based on the interviews conducted, several abilities developed in sales have proven valuable for their role as MSLs.

The most mentioned skill (77.8% of interviewees) was developing and nurturing strong interpersonal relationships with clients. The ability to form solid connections with physicians by understanding their needs and preferences is a key asset that supports the MSL's work.

Flexibility and the ability to adapt to unforeseen circumstances were mentioned by 66.7% of interviewees. Understanding the dynamics of the hospital environment and the availability of healthcare professionals enables MSLs to interpret the context of each call and handle potentially uncomfortable situations, such as last-minute cancellations, with diplomacy and confidence.

Perseverance and proactivity in interactions with physicians were highlighted by 55.6% of respondents. Sales experience instills the willingness to reach out to new professionals. Learning to persist without being intrusive and knowing how to approach physicians in various settings strengthens relationships and facilitates access to relevant information.

Similarly, 55.6% of interviewees highlighted the importance of call preparation and planning. Sales experience provides the ability to plan meetings strategically, while assertive communication, active listening, and adapting the message based on context have proven to be essential skills for making a positive impact in discussions with physicians.

Finally, although mentioned by a smaller group (11.1%), business acumen, emotional intelligence, and confidence were identified as transferable skills. This perspective allows MSLs to align their scientific work with corporate goals and vice versa, facilitating effective communication with key stakeholders.

How did you perceive the relationship between the sales department and the medical department? Has it changed since becoming an MSL? Have any myths you believed been disproven or confirmed?

Despite the small sample size, understood as the number of interviews conducted, the responses to this question were notably diverse, and in some aspects, polarized.

Some interviewees previously saw the medical department as a separate entity working somewhat independently from the rest of the organization; its inherently cross-functional role became evident, and therefore the myth was disproven. Perceptions varied by company: individuals from collaborative environments maintained their views, whereas those from less integrated settings reported an improved perception of medical affairs in their current roles.

Additionally, a small percentage of interviewees mentioned having worked with colleagues who were unaware of the depth of the MSL role's responsibilities, meaning they didn't feel their contribution was adequately valued. This was seen as one of the reasons for difficulties in collaboration.

From the perspective of those with more experience in the industry, they believe that over time, the relationship between MSLs and sales reps has become more integrated into common strategies, and today, both are better aligned while maintaining compliance.

Another aspect mentioned was that the medical department is seen as the key reference for healthcare professionals, with the MSL playing an important role in scientific communication.

Regarding salary perception, the belief that MSLs earn significantly more than sales representatives was disproven. Although an MSL's base salary is typically higher, when considering other incentives, total compensation can be lower.

Do you believe the MSL is just another salesperson?

One of the most debated topics in the pharmaceutical industry is whether MSL can be considered, to some extent, a seller. Interviewees revealed a clear division of perceptions, with arguments that support both positions and nuances that enrich the discussion.

On the one hand, a small minority mentioned that although the MSL does not aim to sell, the service it provides could be interpreted as an indirect commercial contribution. For example, in therapeutic areas where patient targets are scarce, their interactions can be so critical that they can be perceived as close to a sales role, when, in reality, they serve exclusively medical criteria. Furthermore, it was mentioned that the role of the MSL is particularly crucial in the pre-launch phase, and its efforts can significantly influence the initial adoption of the product.

On the other hand, the majority of those interviewed (67%) vehemently rejected the idea that the MSL is a salesperson, emphasizing that its role focuses on medical education and the dissemination of evidence-based information, that is, objectively (Figure 8). It is mentioned that the MSL always addresses (including off-label) discussions towards scientific rigor without direct commercial interests. In this sense, they advocate that MSL serves as a bridge to close the gap between scientific advances and clinical practice, ensuring that healthcare professionals have access to the latest medical knowledge.

Figure 8. Do you believe that the MSL is just another salesperson? Total n=9.

What advice would you give to someone working in sales who is considering transitioning to the medical affairs department as an MSL?

For those working in sales and considering the transition to the medical department as an MSL, there are several key recommendations outlined by the interviewees to help facilitate this process (Figure 9).

First and foremost, as it has been previously discussed, the role demands significant dedication. The transition requires a high level of medical and scientific knowledge, so continuous study and staying updated on diseases and therapeutic innovations is crucial. Critical reading of scientific articles and developing analytical skills will help demonstrate the ability to absorb and communicate medical information rigorously. Said so, intrinsic motivation is key to success.

Additionally, the interviewees believe that seeking support and guidance within the medical affairs environment is key. Having a mentor, preferably a senior MSL, and spending time with the medical team will provide a clearer understanding of the role and the expectations associated with it. It is also advised to show proactivity and commitment even before obtaining the role. Organizing the logistics of clinical sessions within the assigned territory, staying informed about the territory's needs in terms of scientific developments, and proposing initiatives aligned with the MSL's work can help gain visibility and demonstrate readiness for the transition.

It is worth noting that it is also important to manage expectations regarding job compensation. Some interviewees mentioned that, while the base salary of an MSL may be higher, it does not always equate to a higher total compensation. The pursuit of

change should not be driven by economic reasons.

Lastly, it is recommended to persevere and not get discouraged if the opportunity doesn't materialize on the first attempt. Persisting, staying focused on the goal, and consistently demonstrating the necessary skills can make all the difference. Being open to feedback, being honest about the motivation for the change, and communicating it effectively to managers can facilitate the transition.

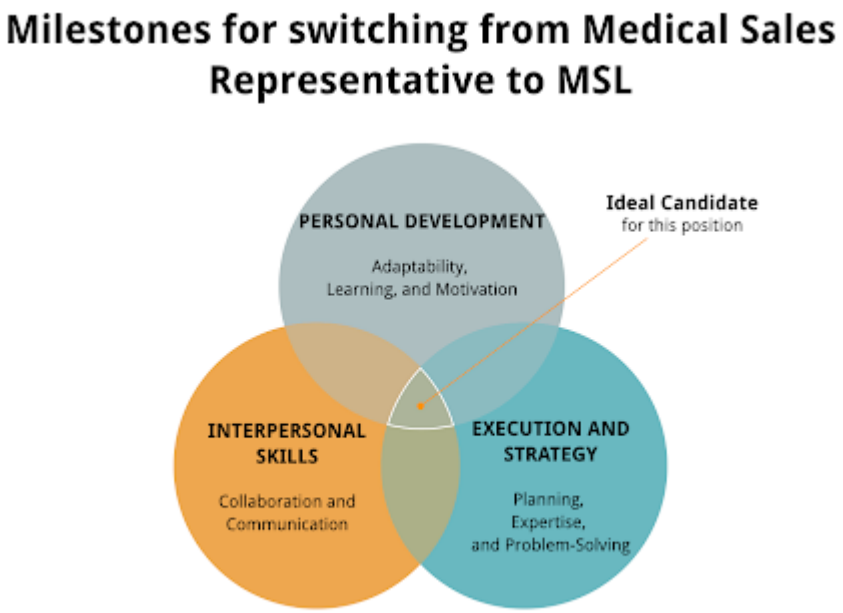

Figure 9. Venn's diagram with the main milestones mentioned by the interviewees to switch from Sales representative to MSL.

Conclusion

This study underscores that moving into the MSL role is a complex journey, demanding both technical expertise and strategic adjustments. It is recognized that, regarding field positions in the pharmaceutical industry, being an MSL differentiates from the sales representative, with the focus only on medical education and scientific evidence discussions. Therefore, sales representatives who aim for a change must refine their scientific acumen and adjust their communication style to align with medical affairs. However, it is important to acknowledge that a background in sales brings strong interpersonal skills, resilience, and a deep understanding of the commercial landscape, skills that greatly contribute to their development in the new role.

In conclusion, the article emphasizes that moving from a Sales representative to MSL is a possible pathway, as long as scientific curiosity, flexibility, and robust professional networks are cultivated, facilitating the transition. By gaining a clear understanding of the role's demands and preparing effectively, aspiring MSLs can confidently make this career change and excel in the field of medical affairs.

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Héctor Cuerda is a graduate with honors in Veterinary Medicine and has experience in medical environments and basic research, particularly in neurosciences. He has a deep passion for advancing the pharmaceutical and biotechnology industries, leading him to pursue an MBA and equipping him with a unique strategic mindset. Assertive, proactive, diligent, and resilient, he excels in cross-functional roles where collaboration is essential and execution is key. His commitment to continuous learning fuels his dedication to contributing to innovative, health-improving solutions from a ONE HEALTH perspective.

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Victor has more than 20 years of experience in the pharmaceutical biotech industry, Medical Affairs, and R&D. Professor in several master's and Pharma MBA Coordinator. Passionate and author of various publications related to the MSL position. He is currently a Senior MSL Head at Amgen, with responsibility for Bone Metabolism, Neuroscience, Inflammation, and Rare Diseases. Victor has previous experience at Parke-Davis and Pfizer. In 2018, he received the MSL Award of the Year-Outside USA from the MSL Society. Victor is also a Board-Certified Medical Science Liaison (MSL- BC®).

Harnessing Publicly Available Bibliometric Tools: Empowering Medical Science Liaisons

By Eyitayo Fakunle, PhD, MPH, MBA, MSL-BC | Summer 2025

Aspiring Medical Science Liaisons (MSLs) and MSLs in career transition often face the challenge of staying competitive without access to proprietary tools or institutional resources. Yet, they must demonstrate strategic thinking, scientific fluency, and familiarity with the research landscape to break into or return to the pharmaceutical industry. In this context, publicly available bibliometric tools become powerful equalizers. These platforms allow MSLs to conduct landscape assessments, identify KOLs (Key Opinion Leaders), uncover unmet medical needs, and plan territory strategies. This article outlines how bibliometrics can support MSLs not currently embedded in pharma while remaining valuable to those already in the role.

My Journey with Bibliometrics

I first encountered bibliometrics a decade ago during my early career as a medical affairs associate. Part of my role in a regenerative medicine medical device company involved supporting publication planning, my entry point into bibliometric analysis. Through it, I gained insights into research landscapes, identified KOLs, and uncovered literature gaps that informed medical affairs strategy and cross-functional collaboration. That foundation continues to shape how I use bibliometrics in my current MSL work—enhancing thought leader engagement and staying aligned with cutting-edge developments.

What is Bibliometrics?

Bibliometrics is the quantitative study of academic publications (1). It uses trends like publication volume and metrics such as citation counts, h-index, and journal impact factors to assess scholarly influence. Citation counts reflect how often a publication is referenced; the h-index combines productivity and impact; impact factors assess journal credibility and reach.

More advanced analyses can visualize co-authorship networks, spotlight emerging research themes, and identify influential

institutions. With platforms like Biblioshiny (2), VOSviewer, Google Scholar, and PubMed, MSLs can remain current and engage more effectively with thought leaders—even without access to proprietary tools.

How Bibliometric Tools Help MSLs Drive Patient-Centered and Strategic Impact

Publicly available bibliometric platforms empower both aspiring and established MSLs to understand the therapeutic landscape, identify key stakeholders, and align their efforts with strategic priorities. Whether preparing for interviews or executing in-field strategies, these tools support data-driven insights and informed engagement.

Identify Unmet Medical Needs

Bibliometric scans can uncover research gaps by comparing publication volume with disease prevalence. This helps MSLs prioritize efforts in regions where scientific attention is lacking—creating opportunities for impactful education and support.

Pinpoint Key Researchers and Institutions

Analyzing co-authorship and institutional trends enables MSLs to identify influential KOLs and academic centers. These insights guide meaningful, evidence-based engagement strategies in both established and underserved areas, helping MSLs bring scientific value where it’s needed most.

Inform Strategic Outreach and Regional Planning

Bibliometric analysis offers a data-driven approach to mapping scientific activity and identifying geographic gaps in research output. This method is especially valuable in high-impact therapeutic areas such as immuno-oncology. For instance, a scan of publication trends from 2010 to 2025 in the checkpoint inhibitor space—focused on PD-1/PD-L1 pathways—reveals that while coastal hubs dominate output, regions like Arizona remain underrepresented despite housing respected institutions such as the University of Arizona Cancer Center and Mayo Clinic Arizona, both of which contribute meaningfully to the literature.

By uncovering these disparities, bibliometrics can guide strategic planning for medical affairs. Understanding where research momentum is concentrated—and where it is not—helps MSLs prioritize outreach, strengthen engagement with local investigators, and tailor educational efforts to emerging or underserved regions.

Understand the Competitive and Therapeutic Landscape

Beyond geographic trends, bibliometric methods can illuminate shifts in the therapeutic and competitive landscape—highlighting emerging targets, evolving publication patterns, and changes in sponsor activity. While Merck and BMS continue to lead in checkpoint inhibitor research, companies like GSK, AstraZeneca, and Incyte are gaining visibility. These insights not only inform strategic engagement for MSLs in the field but also help candidates articulate a company’s pipeline strengths and position within the broader immuno-oncology space.

Prepare for MSL Interviews

For aspiring MSLs and those in transition, bibliometric insights offer a strategic edge. They can highlight a company’s key therapeutic focus areas, identify influential researchers in the field, and surface timely topics for discussion. Referencing these insights during interviews signals a proactive mindset and the ability to engage with scientific content in a way that aligns with medical affairs objectives.

Unlocking Strategic Insight Without Proprietary Tools

One of the biggest advantages of bibliometrics is accessibility. Free tools like Biblioshiny, VOSviewer, and Google Scholar offer low-cost access to insights that support both interview prep and in-role execution.

In the same scan of 244 PD-1/PD-L1-related publications (January 2010–June 2025), high activity was seen in NSCLC and melanoma, while fewer studies addressed gastric cancer and triple-negative breast cancer—MSLs can use such data to support inclusive outreach, engage underserved researchers, and advocate for equity in medical engagement.

These tools also reveal broader patterns—such as shifts in collaboration networks or institutional output—and help MSLs monitor publication growth aligned with clinical milestones. For example, checkpoint inhibitor literature surged between 2015 and 2021, paralleling key approvals for pembrolizumab and nivolumab.

Compliance Considerations and Small Company Opportunities

Once onboard, MSLs must follow their company's internal policies regarding use of external tools. Most organizations provide access to proprietary platforms and set clear data privacy protocols. However, in startups or smaller biotech firms where paid platforms may be limited, publicly available tools can be valuable for insights and field strategy, with minimal overhead.

Case Example: PD-1/PD-L1 Bibliometric Insights (2010–2025)

A bibliometric scan using Biblioshiny of 244 checkpoint inhibitor publications yielded key insights:

- **Publication Growth**: Sharp rise from 2015–2021, aligned with key trial milestones.
- **Top Journals**: *Journal for ImmunoTherapy of Cancer*, *Clinical Cancer Research*, *Annals of Oncology*.
- **Leading US Institutions**: UPMC Hillman Cancer Center, Pittsburgh, PA; Memorial Sloan Kettering Center, New York, NY
- **Regional Opportunities**: Arizona institutions contribute meaningfully but are underrepresented compared to coastal hubs, suggesting untapped potential.
- **Emerging Themes**: "Tumor microenvironment," "immune resistance," and "combination immunotherapy" are gaining traction.

These patterns can be visualized using co-authorship and keyword cluster maps, which in turn inform regional strategies, KOL identification, and therapeutic engagement.

Figure 1: Biblioshiny Visualizations of PD-1/PD-L1 Clinical Publications*
This figure shows visualizations from Biblioshiny, based on 244 PubMed-indexed clinical studies on PD-1/PD-L1 inhibitors published from 2010 to mid-2025. (a) Annual Scientific Production: A rise in publications reflects growing clinical focus on checkpoint inhibitors. (b) Word Cloud: Common keywords highlight therapeutic themes such as antibodies, nivolumab, and combination chemotherapy. (c) Collaboration World Map: Strong international research networks center on the U.S., Europe, and East Asia. (d) Tree Map: Key research themes include patient age, tumor types, and immune checkpoint–related therapies.

**This figure reflects sample outputs from Biblioshiny and is not intended as a comprehensive or definitive landscape analysis*

Conclusion

Whether you're a job-seeking MSL preparing for interviews or an in-role MSL supporting strategic initiatives, bibliometric tools offer a reliable way to generate timely, actionable insights. They empower you to elevate scientific conversations, build equity into your outreach, and deliver patient-centered value without proprietary software. With the right mindset and tools, MSLs can stay sharp, relevant, and impactful at every stage of their journey.

Table 1: Overview of Publicly Available Bibliometric Tools

This table summarizes 10 publicly available bibliometric tools, highlighting their functionality for citation analysis, research trend detection, author and institution mapping, and collaboration network visualization. These platforms are beneficial for medical science liaisons seeking to generate insights without proprietary software, whether preparing for interviews, planning territory strategies, or supporting field engagement

Tool Name	Description	URL
Bibliometrix/Biblioshiny	R-based platform and web app for full bibliometric analysis	https://www.bibliometrix.org
VOSviewer	Network visualization tool for mapping authors, keywords, and institutions	https://www.vosviewer.com
OpenAlex	Open-access scholarly metadata platform; API and search interface	https://openalex.org
Google Scholar	Academic search engine with basic citation metrics	https://scholar.google.com
Citespace	Java-based software for trend and cluster detection	http://cluster.cis.drexel.edu/~cchen/citespace/
Sci2 Tool	Modular toolkit for multi-level bibliometric analysis	https://sci2.cns.iu.edu/user/index.php
Lens.org	Comprehensive patent and scholarly database with citation analysis tools	https://www.lens.org
Research Rabbit	Literature mapping and visualization tool with collaboration features	https://www.researchrabbit.ai
Dimensions.ai (free tier)	Freemium access to publication trends and metrics	https://www.dimensions.ai
Scopus Preview	Limited-access interface for author metrics and abstracts	https://www.scopus.com

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Tayo Fakunle is a seasoned Medical Science Liaison with a strong track record in pharmaceutical, biotechnology, and medical device sectors. Most recently, she transitioned into oncology, bringing prior experience in respiratory, allergy and immunology, orthopedics, cell therapy, and regenerative medicine. Tayo is dedicated to building outcomes-driven relationships with healthcare professionals and academic institutions through evidence-based scientific dialogue, research support, and disease-state education. She is passionate about innovative approaches to professional development and education, grounded in her strong scientific and academic foundation.

Strategic Medical Scientific Liaison for the Medical Affairs Team

By Yanier Coll Muñoz, MD, MBA | Summer 2025

Advancing medical strategy through scientific engagement and knowledge generation remains fundamental for the Medical Affairs department in pharmaceutical companies. Demonstrating the value they bring to healthcare and access systems by improving patients' lives with innovative products is now indispensable.

Impact measurement is key to understanding the real value of medicine. The current Medical Scientific Liaison **(MSL)** approach should focus on the quality of interactions and the evaluation of both quantitative and qualitative metrics based on value creation and impact, surpassing traditional metrics. This change brings us closer to meeting the relationship and influence needs with opinion leaders and the scientific community.

MSL activity must start from a Medical Plan aligned with the medical strategy and demonstrate the objective impact of scientific interactions with external scientific experts over time. Measuring the change in opinion leaders' mindset—evaluating their knowledge, attitude, and clinical behaviors—allows for assessing individual progression and demonstrating the value of established medical objectives.

The MSL medical engagement plan must be aligned with the medical objectives and scientific imperatives of the therapeutic area, which in turn align with the brand's imperatives. It must include segmentation of key opinion leaders and institutions, strategic tactics, and the activities to be developed.

Feedback and Omnichannel Interaction

Feedback during scientific interactions, whether in-person or digital, allows for evaluating the quality of activities and their influence. To optimize results, it is essential to connect all communication points with key opinion leaders (KOLs) through different channels, not only being omnichannel but also integrating with the scientific communication plan. The CxQ (Customer Experience Quotient) allows us to measure healthcare professionals' perception of their interactions with the MSL, based on relevance, simplicity, and trust.

Insights and Decision Making

Optimized management of medical insights provides valuable information about the healthcare environment, unmet needs, and medical decisions. These insights must be actionable and impact the medical strategy. Interpretation and analysis through artificial intelligence improve the impact on decisions, support product development, and add cost-efficiency, benefiting patients.

Interdepartmental Collaboration

Transparent communication with commercial teams allows for identifying areas of opportunity in medical education and scientific communication. This response from the medical areas must be agile and effective, allowing us to maintain our scientific commitment.

Conclusions

Addressing current challenges requires a diligent and initiative-taking approach from medical affairs teams, including MSL, for effective decision-making that generates real value for all involved in the healthcare ecosystem.

Medical affairs must continue to rapidly and nimbly incorporate impact assessment metrics to add value to interactions with healthcare professionals, and specifically with key opinion leaders, and ensure that their analysis organically influences medical strategy.

There is no single path to achieving the strategic impact of MSL within the Medical Affairs department. Leveraging diverse communication channels, building trust in the scientific role of MSL, and connecting with business areas are essential to achieving this goal, along with leveraging new two-way digital communication opportunities and AI tools.

Disclosure: The author is an employee of Sanofi and a Member of the Medical Affairs Professional Society. The ideas discussed in this manuscript belong to the author and do not represent the views or endorsements of his employer.

About the author:

Yanier Coll Muñoz, MD, MBA

Yanier has more than 10 years of experience in the healthcare industry. He has held various leadership positions, including Clinical Research Associate (CRA), Medical Advisor, Medical Scientific Liaison (MSL), Medical Manager, and Medical Operations and Excellence roles in the pharmaceutical industry. A specialist in cardiology, he is a full member of the Mexican Society of Cardiology.

Yanier holds a master's in business administration from the International University of La Rioja (UNIR) and specialized diplomas in Pharmaceutical Marketing from Anahuac University in Mexico and Applied Statistics from the Autonomous Technological Institute of Mexico. Additionally, he earned a Master of Science with a specialty in Medical Emergencies from the University of Medical Sciences of Villa Clara in Cuba.

The Unique Role of Medical Affairs to Support Rare Disease Pipeline Activities Through Tactical Field Engagement

By Christopher Hansen | Summer 2025

I. Overview and Purpose

While the roles, responsibilities, and titles of Field Based Medical (FBM) personnel vary in each organization, they are universally viewed as the scientific experts of the pharmaceutical/biopharmaceutical company and engage in unbiased scientific discussions. Their role encompasses the lifecycle of a product, including pre-approval pipeline assets and marketed products (Figure 1.1). The ability of FBM to work on pipeline assets requires FBM to have an understanding of the drug development process, differentiate itself cross-functionally, and interact with multiple stakeholders. Internally, this may include clinical development teams, and externally, may include clinical research organizations (CROs) and health care providers (HCPs), including physicians, advanced practice providers (APPs), genetic counsellors, nurses, and pharmacists.

While pipeline assets are still in development, FBM personnel operate within a unique position. They regularly interact with HCPs about the disease states of interest and molecules in development. While the Code of Federal Regulations clearly states promotional safety and efficacy claims cannot be made prior to approval, the provision does not restrict the exchange of scientific information (21 CFR 312.7(a)). The relationships developed with HCPs are integral to the provider, patients, and the company. Providers have the greatest understanding of the disease state of interest, how their patients have responded to available treatments, unmet medical needs, what their patients consider advancements in care, and what the care gaps are. A collection of such clinical insights by the FBM team helps guide companies on how to prioritize drug development, how the studies should be designed, how therapies may be perceived, and whether the drug will still be needed and utilized, considering the projected approval timeline.

HCPs get their information from multiple sources – journals, conferences, peers, online learning platforms, blogs, industry representatives, patients, etc. Separating truthful information from misinformation and disinformation can be challenging. FBM personnel can help providers sort through mis- and dis- information by providing the most current literature. The knowledge that FBM brings can assist a provider in making a decision about patient treatment when no approved options are available for the condition, a treatment is not working, or by using unpublished Clinical Study Report (CSR) data on file. The development of strong relationships between FBM personnel and trial site Primary Investigators (PI) and providers in surrounding non-study sites treating the conditions being studied is beneficial in the recruitment of patients to participate in clinical studies.

II. Field Tactics to Support Study Execution and Strategic Insight Generation

From a study execution standpoint, the FBM team provides support in collaboration with the clinical study unit (CSU). Due to their established relationships with HCP networks in different geographies, the field team is able to support site identification and initial site feasibility assessments (patient population, staff bandwidth, investigator expertise). Once a trial is activated, the FBM serves as a direct liaison with the site to identify barriers in recruitment to resolve challenges. For rare disease studies, patient recruitment is often a challenge due to a paucity of patients, protocol complexity, and travel limitations (Figure 1.1). This information can be taken to relevant internal departments (such as clinical development and clinical operations) to determine if solutions can be identified and instituted.

From a strategic standpoint, FBM personnel collect insights that prepare the organization for launch. Their field activities strategically evaluate the needs within a therapeutic area regarding data analyses, patient needs, product differentiation, and potential access issues. Their feedback is incorporated into strategic initiatives, including post hoc analyses, access and distribution planning, or educational launch efforts to offset challenges that may be encountered at launch. Insights are collected from all key personnel within the study team – the PI, sub-Investigator, research coordinators, and advanced practice providers. Specific execution tactics, including field-led advisory boards, multidisciplinary round tables, or targeted journal clubs, may be utilized to encourage discussion around disease states and assets in development. These initiatives help inform cross-functional partners in market access, commercial, marketing, and launch readiness teams to help shape key activities.

III. Medical Affairs Support of Managed Access Programs and IND Pathways

Therapeutic development is essential to improve patient outcomes, especially in rare diseases where treatment options are often scarce. Even when clinical trials do not meet their pre-defined endpoints, the insights gained from these studies are invaluable. They contribute to a deeper understanding of disease mechanisms, inform future research strategies, and refine therapeutic approaches. In rare diseases, where patient populations are limited and variability is high, each clinical program adds to a growing knowledge base that can shape regulatory pathways and drive innovation. These efforts ensure that even setbacks pave the way for eventual breakthroughs, fostering hope and progress for patients in need.

FBM teams support early access to therapies before their official launch, particularly within Managed Access Programs (MAP) and Investigational New Drug (IND) applications. By engaging directly with healthcare professionals, FBM teams provide timely, reactive information on the availability and eligibility criteria of pre-market therapies, helping bridge the gaps in patient care where treatment options are limited. Their expertise ensures that clinicians can make informed decisions regarding compassionate use pathways, regulatory requirements, and risk-benefit considerations. Through these interactions, FBM

supports patient access to innovative treatments, fosters ethical and transparent communication, and supports the responsible use of investigational therapies in critical medical situations.

IV. Conclusion

It is clear that medical affairs teams play an instrumental role in rare disease pipeline development (Figure 2.1). Beyond logistical efforts and acting as “boots on the ground” for a clinical study team, medical affairs activities are essential to collect insights and learn about the needs of a patient population prior to launch, while also supporting managed access and compassionate use programs. For this reason, medical strategists recommend FBM efforts be initiated at least three years before the launch of a product. For many rare and aggressive diseases, molecules in development may be the first and only hope at expanding the lifespan of a patient. By liaising between the company and the HCP communities, FBM teams provide an opportunity to those who need it most.

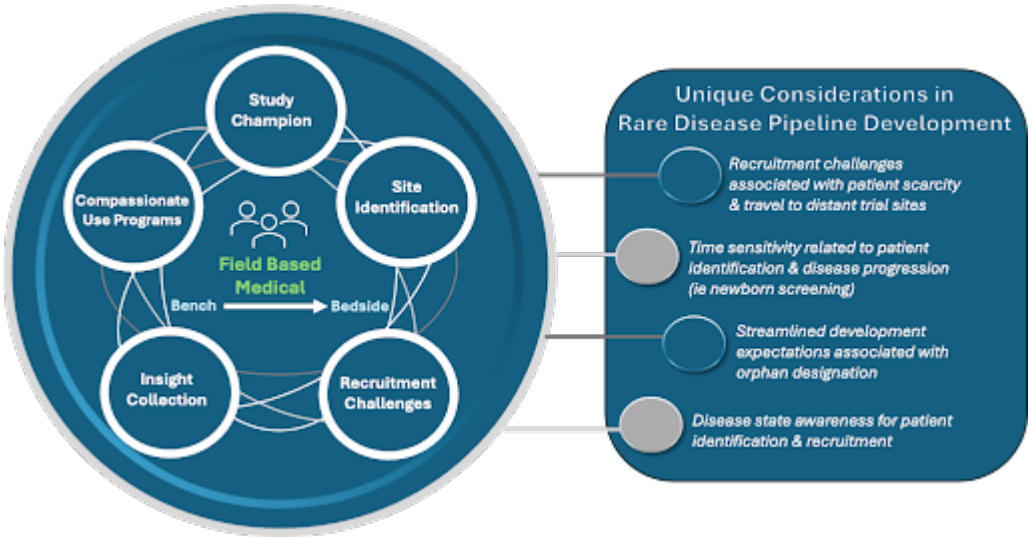

Figure 1.1 Field Medical Plays a Critical Role in Advancing Rare Disease Pipeline Activities. Field medical teams support pipeline development in a number of ways. Their responsibilities include site identification, supporting recruitment, collecting insights, and liaising contact and inquiries regarding compassionate use/managed access programs. Unique challenges of rare vs. non-rare pipeline activities include recruitment challenges due to patient scarcity, time sensitivity regarding disease onset/progression, streamlined development expectations, and disease state awareness initiatives to support recruitment and connecting patients to trial sites.

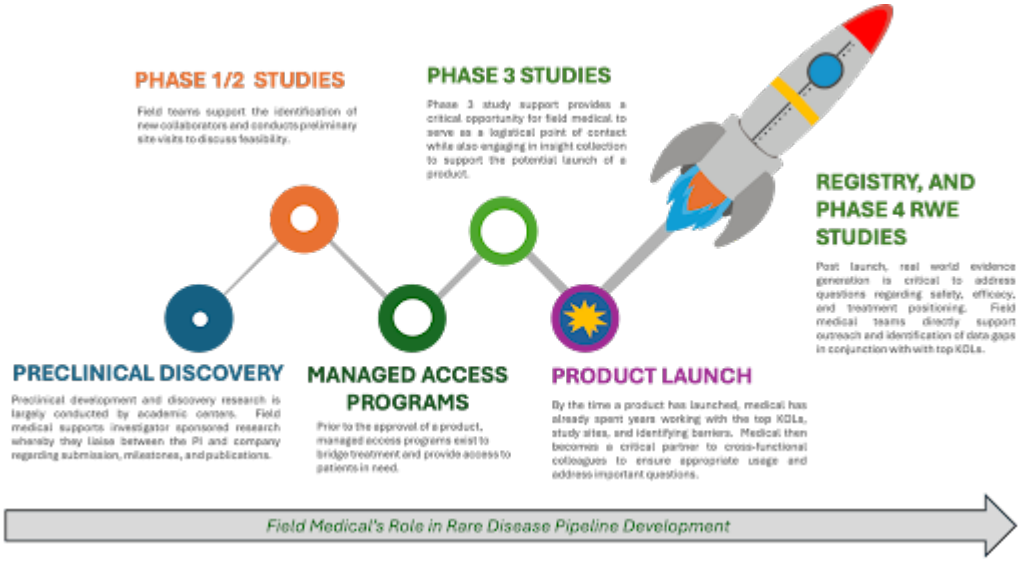

Figure 2.1 Field Medical Supports the Lifespan of Product Development. Clinical development involves FBM activity throughout all aspects of drug development. From the bench, preclinical work is supported as a liaison with Research & Development (R&D) collaborations and investigator-sponsored studies. Phase 1, 2, and 3 studies involve FBM efforts to support identification, recruitment, serving as a point of contact for logistical challenges, and potentially requests regarding MAP programs or compassionate use. Following launch, FBM activities move on to support Real World Evidence (RWE) activities and phase 4 collaborations.

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Chris is a translational scientist by training with extensive experience in the pharmaceutical industry and medical affairs. Chris completed his PhD and postdoctoral training at the Ohio State University and later completed his MBA with a specialization in healthcare leadership. He has spent over a decade in the industry working as an MSL, Medical Director, and MSL Director. He has supported 13 product/indication launches while leading HQ and field strategy development for field teams. Throughout this time, Chris has consistently looked for opportunities to mentor new and aspiring MSLs. He seeks to transform healthcare by inspiring field medical teams to deliver high-quality patient-focused engagement. When not at work, Chris is an avid runner and loves spending time with his wife and four children.

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Disclaimer: The ideas discussed in this manuscript belong to the authors and do not represent views or endorsements of their employer.

The Benefits of an Online Presence for the African Healthcare System

By Alima Tchafa, PhD | Summer 2025

African healthcare lags behind major healthcare systems generally due to its inadequate infrastructure, limited disease prevention strategies, and shortage of healthcare providers to serve a growing population. Over the last decade, several African countries have made strategic investments in their medical facilities, making significant strides in improving healthcare accessibility and services that match those seen in the United States and Europe. South Africa, Tunisia, Kenya, and Nigeria are currently recognized among the top countries in Africa with improved and accessible healthcare: they expanded access to primary health care services; are providing necessary services (i.e., maternity) free of charge or health insurance subsidies to the elderly and disabled; and have enough public and private hospitals across the country to cater to both urban and rural patients with several state-of-the-art facilities. (1) These changes are encouraging but rare across a continent of 54 countries, and the majority of the continent still faces systemic challenges with underdeveloped healthcare ecosystems.

To exacerbate the problem, healthcare facilities and providers active across the continent are still largely absent online. Many hospitals and clinics lack websites. And those that do often fail to keep them up to date with accurate information. Social media usage among African healthcare professionals remains minimal. At a maximum, some individuals have a Facebook page with outdated images that often include incorrect phone numbers, thereby limiting patient access to reliable health information. Meanwhile, internet penetration in Africa has grown significantly, with some countries reaching 85% penetration as of 2020. (2) We know that African patients and consumers are online through cellphones at rates similar to those seen in the West. Smartphones generated 75% of web traffic, with only 24% attributed to PC devices. (3) African patients use their smartphones to access health-related information, but unfortunately, they frequently struggle to find information on local providers or facilities. They currently rely on word of mouth, anecdotal reputations, and sometimes folktales to decide where to receive the care they need. Although more significant in sub-Saharan francophone countries like Cameroon, Gabon, and Chad, it is also an issue in countries with improved and accessible healthcare. For example, a 2018 survey of plastic surgeons in South Africa (the poster child for best in Africa) revealed that only 18% had a social media presence (Facebook, Twitter, or Instagram account), and only 42% had a website. (4) This is simultaneously significantly higher than the rest of Africa, and lower to peers in the US or Europe.

It is now standard for medical centers, hospitals, and clinics in the USA to maintain active profiles on the most prominent social media networks. A recent survey of 1,700 American adults found that 60% of patients select providers based on their positive online reputation. (5) Digital presence became even more critical in 2020 as countries went into lockdowns and several healthcare facilities closed due to local regulatory restrictions, high patient burden, and staff shortages. The COVID-19 pandemic significantly burdened global healthcare ecosystems and highlighted the importance of developing efficient and adequate digital health solutions. (6–8) Telemedicine experienced significant growth during the pandemic, but primarily in developed countries. It is time for African healthcare professionals to recognize that digital channels influence patient decisions at all stages of the patient journey. Therefore, they must invest efforts and resources accordingly.

Medical affairs professionals are uniquely positioned to support the digital transformation of healthcare in Africa. Their expertise in scientific exchange, stakeholder engagement, and healthcare communication can help bridge the gap between healthcare providers and digital platforms, facilitating more effective communication and collaboration. Medical Science Liaisons (MSLs) can educate healthcare providers on the importance of establishing an online presence as a foundational step for digital telehealth solutions. By informing healthcare organizations about best practices, regulatory considerations, and technological advancements through digital health innovations, medical affairs teams can help integrate these innovations into clinical

workflows and support this transition in Africa.

Benefits to physicians and patients:

Today, it is essential for a healthcare facility to have a website. The internet provides incredible opportunities for communicating health information. A well-maintained website and active social media presence allow healthcare providers to share accurate medical information, combat misinformation, and educate patients on disease prevention. A website provides a 24/7 online presence, enabling patients to access health information from the comfort of their homes. Moreover, online education helps tackle misinformation. (9) The absence of qualified medical voices online and the rise of false medical news are confusing populations and harming the global healthcare system. Specifically in African countries where superstitious beliefs are commonly and easily shared, fear-mongering campaigns propagate through WhatsApp groups like wildfire. Healthcare providers can proactively combat the spread of misinformation by providing peer-reviewed, evidence-based information on their social media channels, helping to dispel unscientific claims and positively influence health decisions.

An online presence provides additional benefits. It enables healthcare providers to connect with international collaborators, participate in research initiatives, and engage with global medical communities. This is particularly valuable for African healthcare professionals seeking to integrate into the broader scientific landscape. It can also help determine the needs of web visitors and the quick incorporation of new services by utilizing analytical tools and traffic data. Website traffic data is also helpful in building effective advertising and providing targeted patient insights and health campaigns.

Strategies for growing an online presence for healthcare professionals

- Hire a web developer: For a small fee, you can have access to professional web designers through third-party vendors who will create a website that fits your needs. At a minimum, the website should include essential features such as contact information, a biography, a professional profile picture, and a section for patients and customers to leave reviews. Since most African users get on the web using mobile devices (i.e., smartphones), it is crucial to have a mobile-friendly website.
- Leverage social media: Create social media profiles that are easily accessible and engaging. Maintain a professional and medically relevant presence on social media by sharing clinically relevant and engaging information.
- Utilize digital analytics: Ensure good customer service to gain patient loyalty and positive reviews. The website and social media profiles will need to be updated regularly with these positive testimonials and reviews from satisfied patients. Track website traffic and social media engagement to refine communication strategies and improve outreach.
- Collaborate with MSLs and Medical Affairs Teams: Partner with MSLs to enhance digital health communication and learn how to integrate innovative healthcare solutions in your practice.

Conclusion

The digital transformation of healthcare in Africa is inevitable. As internet penetration and mobile health adoption continue to rise, healthcare providers must adopt digital platforms to enhance patient care and expand their reach. It is only a matter of time before African healthcare becomes an online industry, and it will soon be essential for African physicians to adopt these platforms and maintain a solid and positive online presence to succeed and thrive in the digital age.

Medical science liaisons (MSLs) and medical affairs professionals can play a vital role in facilitating this transition by educating, supporting, and leveraging data-driven insights. By investing in an online presence, African healthcare providers can enhance accessibility, combat misinformation, and foster collaboration in the evolving digital healthcare landscape.

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With over two decades of experience in basic, translational, and clinical research, Alima's career has equipped her with a unique perspective and a comprehensive understanding of global healthcare.

Alima's roles in the industry include medical affairs, where she participated in the launch of several impactful oncology products. She also managed clinical operations, overseeing national and international solid tumor clinical trials, and in medical writing, supporting scientific planning and execution of medical meetings and market research projects. Alima's academic journey includes completing high school on three continents (Africa, Europe, and North America) and holding a PhD in biomedical sciences, a master's in biomedical engineering, an Executive MBA, and a bachelor of Science in biology with a minor in psychology. Alima was an adjunct professor in Anatomy and Physiology for 3 years. She currently lives in Texas with her husband and daughter.

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With expertise spanning machine learning, deep learning, process automation, and sensor R&D, Franck has developed a unique perspective at the intersection of technology and engineering. His work connects cutting-edge AI research with practical applications that foster innovation in healthcare and beyond.

Franck holds a PhD in mechanical engineering from the University of Texas at Arlington and a Master's in aeronautical engineering from City University of London. He has published peer-reviewed findings on structural health monitoring, showcasing his expertise at the intersection of machine learning and applied sciences. Currently, Franck is focused on leveraging advanced deep learning techniques to drive intelligent automation in healthcare and other industries.

Research Science Liaisons – We're Like MSLs, Only the Opposite

By Kate Ashcraft, PhD | Summer 2025

Research Science Liaisons – We're like MSLs, Only the Opposite

When we first meet with Medical Science Liaisons (MSLs), they are often confused about our role. We can't blame them – our position is unique and very few cancer centers have a role like ours. Our 30-second "pitch" to MSLs is always "We are like you, only the opposite".

Lineberger Comprehensive Cancer Center (LCCC) at the University of North Carolina, Chapel Hill, has always had a strong portfolio of investigator-initiated clinical trials. However, LCCC recognized a need to increase accruals across all disease groups and improve industry partnerships. The Research Science Liaison role was created for PhD-level professionals with the expertise to interface with industry partners, particularly through establishing relationships with MSLs, to scout innovative industry-sponsored trial opportunities. Two RSLs were brought on board, with their work broadly divided into solid tumor and hematologic oncology coverage.

Establishing the RSL role

During the first 6-12 months in our role, our priority was making connections with as many MSLs covering our region as possible. Initially, we leveraged existing relationships with MSLs that providers and the medical writing team already had through investigator-initiated trials via email and requested a short virtual meeting to explain our role. To establish new connections, we sometimes turned to LinkedIn for initial outreach, and other times submitted inquiries through company websites. LinkedIn

messages were slightly more successful than website inquiries. One of our biggest challenges was convincing MSLs to meet with us, given their primary focus on engaging with Key Opinion Leaders (KOLs). We had to answer key questions:

- How do you convince an MSL to meet with you instead of a KOL?
- How do we demonstrate the benefit of meeting with an RSL?

By the end of 2023, we had met with 66 companies in 135 meetings. There was only one instance where a company declined to meet with us. We discovered key advantages to the RSL-MSL collaborations:

1. When an MSL met with an RSL first, they gained a broader understanding of LCCCs clinical trial portfolio, allowing the RSL to facilitate introductions to relevant KOLs.
2. MSLs benefited from a streamlined communication process, reducing the need for multiple emails and providing a single point of contact for all queries and connections. One MSL quoted the following after working with the RSLs, *"Thank you both so much for doing that call so quickly. It helps those internal teams so much to have actual contact with sites. This was a perfect example of why we need someone in your position".*

Outreach and maintaining industry relationships

Our strongest relationships are the ones that we maintain with biannual or quarterly meetings. The conversations during these check-ins serve two purposes. First, we provide general updates about what kinds of trials our disease groups are in need of, and what new providers have joined Lineberger. Second, we like to touch base on what trials we have in activation, and whether there are any inefficiencies we need to course correct. For instance, if a CRO is being particularly slow to respond to our activation team's requests, it can be helpful to have the MSL check in from their end.

Our work is largely remote, and we've found that most PIs prefer to meet with MSLs virtually. That being said, we occasionally have sufficient interest in a company's pipeline to justify an on-site event for MSLs and providers to meet in person and review a company's pipeline. These can also be arranged virtually.

Like MSLs, we attend large oncology meetings, such as ASCO and ASH, both to stay abreast of the newest trial results and to take advantage of having so many of our contacts in the same location. National conferences are a great place to pop into company booths for face time with MSLs we have already been working with, or introduce ourselves to potential new contacts. Prior to the conference, we remind the providers we work with that we will be attending and offer to attend any meetings with industry representatives in their place, if they are not able to travel to that meeting. We also compile a list of abstracts/presentations by our investigators and send them to MSLs in advance in case they want to attend a session. Our first conference attendance was ASCO in 2023. At ASCO 2023, when our role was still developing and we were focused on building relationships, we identified 19 contacts that ultimately led to further meetings. For ASH 2023, we attended 9 clinical trial discussion meetings, which led to 4 industry-sponsored clinical trials undergoing activation at Lineberger. Going into ASCO 2024, we had 9 companies request to schedule meetings with us to catch up with solid tumor-focused MSLs we already knew, to review pipelines, specific trials, or portfolio needs.

Supporting Clinical Trials Internally

Pod "Portfolio Meetings" are held monthly or on an ad hoc basis according to each disease group's preference. The purpose of portfolio meetings is to review studies under consideration, update teams on study progress from initial communication through site selection, and discuss present or emerging gaps in the portfolio where a patient population may benefit from a study. This can also be a time to review trends in enrollment and whether a particular eligibility requirement or element of a study has been hampering accrual.

One of our roles is to shepherd ISTs through the initial steps leading up to site selection. The tasks of submitting CDAs to the legal team, completing feasibility questionnaires, and scheduling site qualification visits rely heavily on email communications that can be overlooked without a designated individual tracking their steps. In addition, by centralizing these processes, we maintain consistency in the answers provided and somewhat standardize what our site agrees to (e.g. virtual vs. in-person site visits, time granted with a potential PI and study team to discuss a study). The RSL also serves as a primary point of contact if an MSL or industry representative needs to discuss a study internally with the UNC team but does not know the right connection. Through our role, we are able to expedite partnerships and improve efficiency. Dr. Sascha Tuchman, Professor of Medicine and the Clinic Medical Director for Malignant Hematology, said the following about the RSL position, *"Your liaising between us and pharma has been truly invaluable in moving things forward. What was previously a haphazard, fairly inefficient process of PI's communicating with pharma about collaborations is now much more organized and effective under your leadership."*

Measuring Impact: Qualitative and Quantitative Accomplishments

Given our collective backgrounds in science, we feel obligated to justify our roles empirically. Have we contributed to an increase in the number of industry-sponsored trials that Lineberger has opened? Are accruals to industry-sponsored trials on the rise? Not surprisingly, quantifying our impact across the cancer center is difficult due to the inherent noisiness of the data. In addition, most of the data for the timelines we now have control over (for example, time to return a feasibility questionnaire to a sponsor or CRO) was not collected prior to our role being created. Other data points (number of opened trials, number of enrollments to trials we identified) require long-term monitoring before trends are apparent. Moreover, the RSL position was established in 2023, when cancer centers were still recovering from COVID shutdowns and the Great Resignation. However, at this time, we can offer anecdotal evidence that we have had a positive impact on study selection and accrual:

In the spring of 2024, a study was posted on clinicaltrials.gov for a patient population that was in need of a trial. The POD leader was interested in learning more, and upon reaching out to the sponsor, we learned that there was a spot for one additional site. Within just 20 calendar days of identifying the study, we were able to expedite a CDA, meet with the sponsor, complete feasibility, and receive a site selection letter.

The RSL role is truly making an impact at UNC LCCC. The most common feedback we receive from MSLs is, “I wish all sites had a role like yours.” The question now becomes: how many other Universities will follow suit?

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Kate Ashcraft holds a PhD in Microbiology and Immunology and has authored/co-authored over 20 articles in the pre-clinical oncology space. Her interest in accelerating novel cancer therapies led her to pivot from the bench to clinical trials in 2018. Currently, she serves as the Research Science Liaison for solid tumors and Phase 1 trials at the UNC Lineberger Comprehensive Cancer Center, where she seeks out innovative trials that best suit the needs of these patient populations.

Kelsey Quinn, PhD

Kelsey has a PhD in Animal Science and Molecular Cell Biology and has authored or co-authored over 15 publications focused on chemokine and cytokine signaling. Driven by a passion for supporting pharmaceutical and biotech companies—and inspired by her father's battle with cancer, she transitioned into oncology clinical research. She currently serves as the Research Science Liaison for Hematology and Cellular Therapeutic trials at the UNC Lineberger Comprehensive Cancer Center.

Recognizing and Reframing Self-Doubt: MSLs and Imposter Syndrome

By Michael M. Sadek | Summer 2025

Medical Science Liaisons typically operate at the intersection of deep scientific knowledge, high-stakes communication, and strategic business alignment. It's a rewarding role—but for many, there's an unexpected emotional hurdle that goes unspoken: *Imposter Syndrome*.

Despite our advanced degrees, scientific expertise, and years of extensive training, many of us quietly carry this fear: that we're not good enough, or that one misstep will reveal we don't belong. I've felt it. You likely have, too. This article aims to define imposter syndrome, explore the different forms this psychological pattern can show up in the day-to-day lives of MSLs, and offer a practical framework for recognizing and reducing its impact, both individually and within teams. My intention is to bring this experience to the surface and share insights that empower MSLs—whether aspiring, new, or seasoned—to recognize and manage these self-limiting thoughts.

What Is Imposter Syndrome?

Imposter syndrome is a persistent internal experience of self-doubt and perceived fraudulence. It's that voice in your head that says:

"If I speak up, people will truly see me for who I am. They will understand that I am a complete fraud and that I am not fit for this position."

These feelings persist despite clear evidence of success—your advanced degree, your position, your impact. It's not a lack of capability, but a gap between how you perceive yourself and how others see you. The result? Many of us overcompensate: working harder, chasing perfection, or isolating ourselves to avoid exposure. This, over time, can erode confidence and contribute to burnout.

Why MSLs Are Especially Vulnerable

The MSL role, by nature, blends science, strategy, and communication—all while operating in a fast-paced, highly visible environment. You're often the scientific face of your organization externally and a credible voice internally. The ever-evolving nature of the pharmaceutical industry means MSLs are continually updating their knowledge and skills. This constant evolution can inadvertently fuel feelings of inadequacy.

MSLs are also often transitioning from academia or clinical practice into industry, or even from commercial roles within the industry—a career pivot that can amplify uncertainty and self-doubt, especially during the first 1–2 years.

Where It Shows Up for MSLs

Imposter syndrome can emerge in a wide range of behavioral patterns for MSLs:

- Holding back in cross-functional meetings, as you think people will perceive you as "incompetent"
- Overpreparing for HCP interactions out of fear of not knowing enough or being asked a question that you don't know how to answer
- Feeling like you don't deserve your role, especially if you're transitioning from academia or clinical work
- Assuming your success is due to luck, timing, or others' mistakes

The Good News–and The Bad News

When dealing with impostor syndrome, the good news is that you are not alone. Even though you may not easily believe it, some of the highest performing professionals in various careers have constantly voiced their fears about not being up to the job. Most MSLs, if honest, will recognize these feelings within themselves. That's the good news: this is common.

The bad news is that again, you are not alone. Many people suffer silently under the burden of those feelings, setting up a workplace culture where people try to mask their true selves and project an image of overconfidence, which results in an endless cycle of mental fatigue and continuous stress. These are not personal flaws—these are mental patterns shaped by high-performing environments, career transitions, and the unique pressures of medical affairs.

Managing Imposter Syndrome: From Awareness to Action

Here are some approaches that have helped me and others in the field:

1. **Name the Thought:** Awareness reduces shame. "This is impostor syndrome talking" creates space between you and the fear.
2. **Track Your Wins:** Keep a private log of accomplishments, praise, and outcomes. This builds a counterweight to self-doubt.
3. **Ask for Feedback:** Constructive, consistent feedback helps calibrate how you see yourself.
4. **Talk About It:** Opening up to a peer or mentor can be a turning point. You'll be surprised how many relate!
5. **Practice Self-compassion:** Be as kind to yourself as you are to colleagues. Striving is healthy. Perfectionism is not.
6. **Use Curiosity:** When the thoughts arise, pause and ask: *What's really going on here?* This mindset shift moves you from judgment to learning.

Final Thoughts – Just listen to Toto

Imposter syndrome is real, but it doesn't define you, nor anyone else suffering from it. I'd like to leave with you an eye-opening quote from **Toto Wolff**, Team Principal and CEO of the Mercedes-AMG Petronas Formula One Team, and to me one of the most successful individuals in the history of motorsports. During his closing comments in the famous podcast **High Performance,** the interviewer asked him the following:

Jake: Final question, your one Golden Rule for living a high-performance life, I guess the thing you'd like to leave people thinking about when they finish watching this conversation

Toto: Hopefully um make people realize that they are not feeling adequate or that they feel bad **that I do so too, and it will all be good, you just have to continue to believe that**. That's what I would like people to take from it, um, that's probably the most important message, and uh, don't take yourself too seriously.

Toto's massive acknowledgment underscores that even at the pinnacle of success, feelings of self-doubt are common. In my own experience, an approach that emphasizes humility and continuous self-assessment can be invaluable for you or other MSLs striving for excellence.

About the author:

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A Medical Affairs associate director with more than 15 years of experience in the pharma industry. His experience includes working in various therapy areas (Women's health, Cardiovascular diseases, Diabetes, Infectious diseases, Respiratory diseases, and others). He contributed to the successful launches of various products in Egypt and in the Middle East region. He has played an instrumental part in numerous regional and global projects throughout his tenure in Medical Affairs. Michael is passionate about Medical Affairs and its critical role in the modern-day pharma industry. He enjoys sharing knowledge and experience with people aspiring to join Medical Affairs through mentorships and educational opportunities.

Strategic Communication in the MSL Role: Bridging Science, Ethics, and Human Relationships

By Alessandro Dinatale, MD | Summer 2025

The implementation of effective communication strategies in the medical-scientific and pharmaceutical business context is essential to ensure accurate dissemination of information, promote collaboration among stakeholders, and support regulatory and marketing objectives. In an industry where credibility, clarity, and compliance are crucial, strategic communication serves as a bridge between scientific innovation and its practical application. This involves translating complex scientific data into accessible content for diverse audiences, including healthcare professionals, regulatory authorities, and patients. Moreover, in the pharmaceutical sector, communication strategies must align with ethical standards and regulatory frameworks, while also fostering corporate reputation and stakeholder trust. As the healthcare landscape evolves, leveraging digital tools and multidisciplinary approaches becomes increasingly important in crafting impactful, science-driven communication tailored to both internal and external audiences.

What does "communication" mean?

In the social sciences, "communication" is broadly defined as a dense network of social exchanges shaped by cultural and conventional norms. It is not just an exchange of information but also an exchange of social relationships that depend on a shared culture or, at the very least, a shared language. A distinction is made between "language" and "speech": language is an abstract, socially determined symbolic system, while speech (or "linguistic ability") is the cognitive faculty that allows humans to communicate symbolically (1). Effective communication, therefore, requires more than a shared spoken language: it demands shared symbolic understandings. For example, this becomes evident in generational communication gaps, where people may speak the same language yet fail to connect due to different symbolic systems shaped by distinct cultural environments. The rapid evolution of digital media has amplified this divergence by introducing new "digital languages." Marshall McLuhan's theory that media shape not only the content but also the form and perception of communication remains highly relevant. He

suggested that communication technologies act as extensions of human faculties and alter the way we experience the world. McLuhan's work builds on earlier contributions by philosopher Ludwig Wittgenstein, especially his concept of "language games." Wittgenstein argued that the meaning of words lies not in their direct reference to objects or ideas but in their use within specific social contexts or practices – language games governed by shared, often implicit rules (2). These rules are not static; they evolve with context and convention. Thus, language is a social tool, not a private one, and MSLs should demonstrate high flexibility to adapt to different "language games" in order to be successful in their relationships with different stakeholders.

Scientific communication by MSLs: ethics, methods, and media tools

The communicative role of the MSL, as outlined by the Medical Science Liaison Society (MSLS), is to provide ethical, professional, and non-promotional scientific communication (3). MSLs must convey evidence-based, balanced information without misleading omissions or promotional bias, and their actions must align with medical strategy rather than commercial goals. Since the COVID-19 pandemic, digital platforms have become crucial tools for MSLs, offering flexibility but also posing new challenges like reduced engagement or loss of non-verbal communication. While digital interactions are practical, in-person meetings are still often preferred (4), likely because non-verbal cues – such as warmth and perceived competence – significantly influence interpersonal trust and rapport. Digital transformation has also shifted the landscape of opinion leadership. Alongside traditional Key Opinion Leaders (KOLs), there are now Digital Opinion Leaders (DOLs), who influence peers via social media and digital channels. MSLs are encouraged to monitor but not actively participate in public social media discussions unless explicitly permitted by corporate policies.

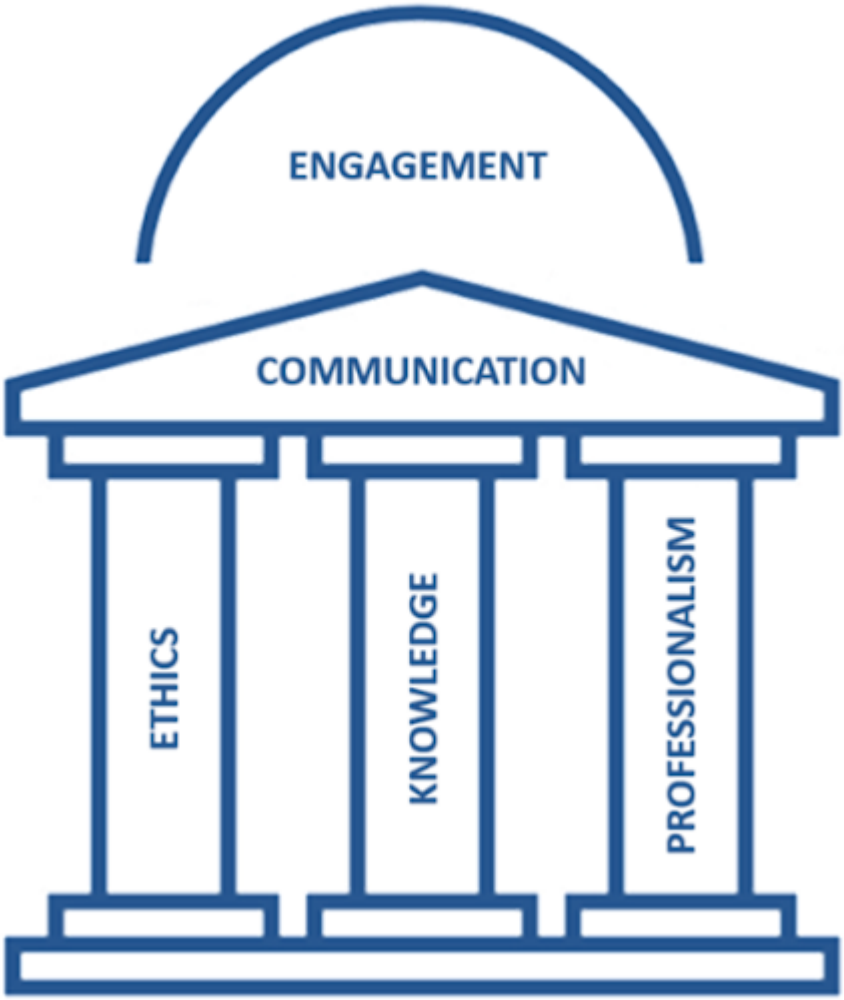
The importance of MSL communication skills from the clinicians' point of view

One key survey by AstraZeneca explored what clinicians value in MSLs (5). The most appreciated traits included scientific product knowledge, credibility, therapeutic expertise, responsiveness, and communication skills. Top MSL resources included unbiased product information, updates on therapeutic areas, and opportunities for research or educational collaboration. Interestingly, dissatisfaction with MSLs often stemmed not from scientific shortcomings but from poor communication or behavior, such as aggressiveness, biased questions, overly commercial tones, or infrequent contact. This suggests that interpersonal and communicative skills, often underemphasized in training, are vital for maintaining strong relationships with KOLs. In response, clinicians have recommended prioritizing communication, networking, and relational skills in MSL training, alongside continued scientific and regulatory education. In essence, successful MSLs must combine technical knowledge with the ability to navigate the social rules of the "language game", as Wittgenstein would have said.

Building a corporate communication strategy and application for medical stakeholders

The final section argues for a structured, measurable approach to communication within organizations. Terms like "quality" or "effective communication" are inherently abstract, and using them without clear metrics risks vagueness (6). Therefore, organizations should integrate communication into strategic frameworks that define specific inputs (behaviors, tactics, actions) and outputs (results). A corporate communication strategy is the overarching set of communicative decisions based on organizational goals and anticipated stakeholder reactions. It must be proactive, adaptable, and aligned with business objectives. Importantly, it also requires recognition of diverse audiences, communication channels, and evolving norms (7).

The ultimate objective of a communication strategy in the context of the MSL–KOL relationship is to foster deep engagement, which arises from the integration of three foundational pillars: a robust cultural background, professional ethics, and the ability to establish authentic interpersonal connections. While communication must remain scientifically rigorous and impartial, the inherently social dimension, previously discussed, reminds us of an essential consideration: every act of communication inevitably conveys aspects of the communicator's identity. As emphasized in management theory, the human dimension of business interactions must not be underestimated.



In the conceptual framework proposed here – metaphorically likened to a pantheon – alongside the central pillar of scientific knowledge, we elevate ethics and professionalism as essential structural elements. These are critical to achieving communication objectives characterized by meaningful engagement: not merely informing, but also building relationships, fostering coordination, and inspiring shared purpose. It is essential to uphold, with intellectual integrity, a clear distinction between the medical and corporate domains. Nonetheless, identifying a shared overarching goal – namely, the improvement of patient care – should serve as the linchpin of the dialogue between these two spheres, and as the primary engine driving innovation within the pharmaceutical sector.

Conclusion

To ensure deep engagement, communication must be authentic and bidirectional. Listening is as crucial as speaking, and messages must be crafted based on a thorough understanding of context and audience. This is especially true for professionals like MSLs, whose credibility depends as much on how they communicate as on what they communicate. Communication can be regarded as a true strategic lever in the MSL profession. It is not merely a tool, but a bridge connecting scientific knowledge, ethical values, and human relationships. To be effective, it must be planned, refined, and evaluated.
It is precisely through communication constructed in this way that trust, synergy, and innovation can emerge within the healthcare sector.

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Fabio Landi

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I also collaborate as a Professor with Marconi University in Rome as part of the Master's program in 'Clinical Research Medical Affairs: Drugs and Medical Devices.'

Not Just the Answer: The Power of the Question No One Else Thought to Ask

By Aya Selim | Summer 2025

For years, the MSL role has been described as a bridge between clinical data and real-world practice, between biopharma and physicians, between innovation and patient care.

But what if the real opportunity isn't being the bridge — it's becoming the architect?

The most successful interactions in the field rarely start with a presentation. They start with curiosity, discernment, and a well-placed question. Not to inform, but to unlock. Not to prove, but to provoke deeper thinking — because when conversations shift from scripted delivery to strategic inquiry, the result isn't just insight. Its influence.

Questions That Position, Not Just Probe

In the launch phase of a new therapy, the field often leads with MOA distinctions, safety highlights, or trial superiority. But prescribing behavior isn't shaped by data alone. It's shaped by trust, relevance, and the mental shortcuts HCPs rely on.

- **What would need to shift for this to become your first-line choice?**
  This does more than uncover resistance. It reveals the mental framework guiding clinical decisions. And that's where real positioning begins.
- **Which of your patients would make this feel like the obvious choice, and which one would make you pause?**
  This sharpens the perceived clinical fit while illuminating hesitation. It separates theoretical agreement from real-

world application
- **If you didn't use this option, what would the deciding factor be?**
  This invites a risk-benefit reflection that the clinician may not have voiced aloud. It's not about changing the answer. It's about uncovering what's influencing it.

These questions don't seek alignment. They seek underlying logic. And once that's visible, so is the path to influence.
Because in the end, knowledge informs — but belief transforms. And that's where influence begins.

Clinical Trial Engagement: Revealing the Real Barriers

Site readiness is often measured in numbers: patient volumes, resources, and timelines. But trial success is often determined by the unspoken team mindset, internal friction, and buried bottlenecks.

- **Is there anything in the protocol that looks manageable on paper but could create friction in practice?**
  It moves the conversation from feasibility to predictability. This helps uncover pain points before they stall the trial.
- **How does your site decide whether a trial is worth the internal effort?**
  This question uncovers cultural context. Trials don't fail just because of design. They fail when no one's personally invested in them.
- **Where do good trials lose momentum at your site, and what would prevent that here?**
  It acknowledges the reality that clinical trials are systems, not spreadsheets. The answer may reveal operational vulnerabilities that sponsors can address early.

These aren't operational questions. They're alignment questions. And alignment is what sustains performance.

Scientific Exchange: From Monologue to Strategic Discovery

KOLs don't remember who presented the cleanest data. They remember who made them think. A great scientific exchange isn't about delivering information. It's about unlocking new perspectives.

- **What are your patients asking that the current data still doesn't answer?**
  This reframes the discussion from evidence about patients to insights from them. It often reveals overlooked endpoints and unmet needs.
- **What would make this go from promising to practice-changing in your eyes?**
  This prompts clarity on the clinician's internal threshold for action. It transforms a passive conversation into one grounded in decision-making.
- **If your peers resist this therapy, what's the argument they'll use, and will it hold?**
  This surfaces the expected counter-narratives. And more importantly, it often reveals whether the speaker has already wrestled with them.

The goal here isn't just engagement. It's cognitive alignment. When the right question is asked, people stop listening passively and start thinking critically.

Inside the Organization: Asking What Moves Strategy

Strategic internal impact isn't about how many insights are shared. It's about whether the right ones are being heard, understood, and acted upon.

- **What's the one field insight that keeps showing up but still isn't reflected in our strategy?**
  This forces internal teams to confront cognitive dissonance between perception and reality.
- **What are our teams assuming HCPs understand but keep getting asked about in the field?**
  This highlights messaging gaps that may not appear in dashboards but show up in real-time decision-making friction.
- **What's the question we keep hearing but haven't answered well yet?**
  This identifies soft spots in the medical narrative where hesitancy lives and clarity is overdue.

These aren't just insight prompts. They're pressure tests. And they push Medical Affairs to lead, not just support.

Final Thought:

The next evolution of the MSL role isn't about knowing more. It's about seeing earlier, hearing deeper, and asking better.

Great questions do more than gather feedback. They shape perception. They disarm, they spark, they guide. And in the right hands, they shift how people think, not just what they know.

Because sometimes, the most powerful contribution in the room isn't the answer. It's the question no one else thought to ask.

About the author:

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Aya Selim is a Pharmacist and Senior Medical Science Liaison with over five years of global Medical Affairs experience, specializing in oncology, hematology, and immunology. She has supported the development of innovative therapies, including cell and gene therapies, and led clinical trial engagement across the U.S. and Europe.

Having lived in multiple countries, Aya brings a global perspective, a deep appreciation for diversity, and a passion for continuous learning. Her expertise spans key opinion leader engagement, clinical trial strategy, and the design of compelling, field-informed medical content.

Aya has collaborated with leading organizations, including Syneos Health, Bristol Myers Squibb, IQVIA, Novartis, and Johnson & Johnson. She is known for her ability to distill complex science into clear, actionable insight and for bringing creativity into how data is communicated and strategy is executed.
Fueled by curiosity and a love for innovation, Aya blends science, storytelling, and technology to shape smarter, more impactful medical engagement. Her ultimate goal is to advance the future of medicine and bring lasting value to the patients behind every conversation.

Utilizing Disruptive Innovation in Medical Affairs

By Andrew Lanier, PharmD | Summer 2025

"Leaders don't look backwards to condemn what has already been done; they look forward to create a better future" – Mark Cuban

As MSLs, we navigate a fine balance between adhering to proven, long-standing processes and innovating to keep pace with today's evolving technological and healthcare landscape. In this article, I aim to help you understand how being a disruptive

innovator can lead to impactful changes in your team's future success.

To become a disruptor, you must first know what a disruptor is. There are many different definitions; however, the one I like best is a broad amalgamation of several. See below:

Disruptor: A person or company that challenges the status quo and creates new ways of doing things.

One of the most famous and outspoken leaders in the disruptive innovation space is Mark Cuban. Cuban's new company, Cost Plus Drugs, aims to be a disruptor in the healthcare PBM space with a goal of ensuring all Americans have access to safe and affordable medications through transparent pricing for prescription drugs. This is one example of how a company can create disruption in the prescription drug space by deviating from the established methods of drug pricing, which are kept behind a shrouded veil.

But how can you, as an MSL or other medical affairs professional, do the same on a smaller scale? Let's discuss.

In an article published in the *California Management Review*, authors Charles O'Reilly and Andrew J.M. Binns defines the three stages of disruptive innovation as: **idea generation** (to generate new business ideas), **incubation** (to validate those ideas), and **scaling** (to reallocate resources to grow the new disruptive item). Their article goes into further detail by showing how the three stages have been utilized in the technology and business sectors by companies to cause disruptive innovation.

I'd like to walk you through a case study that examines each stage of disruptive innovation, using a personal example of how I implemented it as an MSL.

Stage 1: Idea Generation

As a new MSL getting up to speed on my team's KOL list, engagement plans, and tactics, I quickly noticed an issue: gynecologic (GYN) oncology pharmacists' KOLs were nowhere to be found in our engagement plan. As a pharmacist myself, I understood the important role GYN oncology pharmacists play in treatment decision-making and patient care. As such, I notified my medical leaders of the gap in hopes of a concerted effort to engage with these KOLs, which was well received.

However, when I began my new project to find and engage GYN oncology pharmacists, I realized that there were very few KOLs who could be found through traditional processes. When I began engaging with the few I could find, I was further surprised to realize that most of them did not have a network of GYN oncology pharmacist peers they could refer me to or leverage for their own discussions on best practices.

I connected the small group of GYN oncology pharmacists with one another and facilitated a discussion on the scarcity of recognized pharmacists in the GYN oncology community. What we found is that there was no organization, group, or home for GYN oncology pharmacists to connect with one another. From there, the idea was generated: we needed to create a home where new and existing GYN oncology pharmacists could connect and collaborate.

Stage 2: Incubation

In a short time, collaborating with a small group of identified GYN oncology pharmacists, we formed a working group, creating a dedicated space for the community. Within the working group, the GYN oncology pharmacists were already beginning to collaborate and discuss their practices, recent data updates, side effect management, and potential collaborative research ideas.

We also worked to determine the best way to establish a permanent home for the growing community of identified GYN oncology pharmacists. Eventually, we developed a plan to partner with the Hematology/Oncology Pharmacist Association (HOPA) to create a new Special Interest Group (SIG) tailored toward pharmacists working within GYN oncology.

In January 2024, the new GYN Oncology SIG went live with approximately fifteen initial members collected by our small working group.

Stage 3: Scaling

After the initiation of the new SIG, we began to accumulate new members rapidly. It turns out there were numerous GYN oncology pharmacists across the country looking for their community. Three months into the year, we had nearly fifty members.

Today, the GYN Oncology SIG has over eighty members from clinical and industry backgrounds, with a dedicated leadership team. The SIG holds quarterly meetings to discuss new data and updates within the disease space, is working on collaborative research projects, and has a dedicated mentorship program for new GYN oncology pharmacists.

In the example above, I identified a gap that led to the ideation of a new opportunity for GYN oncology pharmacist collaboration. From there, I incubated the idea by bringing the small working group of pharmacists together to begin engaging with one another. Finally, we used the partnership with HOPA and the creation of the GYN Oncology SIG to scale the group in both size and collaboration within the community.

Now you may be wondering how this project was beneficial to me in my role as an MSL. To that, I would reply with the following list of value-added benefits:

- I identified and established relationships with many GYN pharmacy leaders from sites across the U.S., helping deepen our understanding of how these cancers are managed by multidisciplinary teams.
- I participated in and observed timely discussions surrounding treatment landscapes and new data.
- I gathered insights from the SIG surrounding recent data releases (internal and competitive), side effect management of agents in the space, educational tools and resources they preferred for different agents, and more.

In conclusion, I encourage you to look for the gaps or opportunities for improvement in your own role. Is there a problem or process where you could challenge the status quo and create a new way of doing something? If so, utilize the three stages of disruptive innovation (Idea Generation, Incubation, and Scaling) and become a disruptive innovator, leading your team to new successes-just like I have!

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Andrew Lanier is an oncology pharmacist and pharmaceutical industry expert with experience in a number of clinical and medical affairs-based roles, including 3 years as an oncology medical science liaison and a 2024 finalist for the MSL Rookie of the Year award.

He has a service-driven passion to help underserved oncology patient populations in order to ensure all patients have safe and effective therapies for their cancer. He currently works as a Hematology MSL within Takeda Oncology, covering the Great Plains region, and resides in Dallas, Texas.

He enjoys mentoring pharmacy students and other pharmacists as they navigate the uphill battle of the pharmaceutical industry job market. He additionally enjoys educating pharmacy students on his path and roles within the industry to help them determine if a role in the industry is right for them and/or how to create a plan to achieve their dreams.

From Knowledge to Strategic Impact: The Evolution of the MSL Role Across Generations – Vision 2035

By Martina Riosalido, MS | Summer 2025

1. Introduction: From the Margins to the Core of Strategy

It was 1967 when Upjohn Pharmaceuticals introduced a novel role designed to bridge the widening gap between clinical science and medical practice: the Medical Science Liaison (MSL). Initially envisioned as a non-promotional channel for scientific exchange, the MSL emerged in response to growing demands for transparency, ethical communication, and data-driven credibility in an industry under increasing regulatory scrutiny (6).

Over the following decades, the MSL role evolved in parallel with the growing complexity of the pharmaceutical landscape. Biologics, precision medicine, gene therapies, and digital health innovations challenged traditional engagement models. Meanwhile, health systems demanded value over volume, patients called for co-creation, and real-world evidence (RWE) became a strategic asset. Amidst this paradigm shift, MSLs emerged as strategic connectors, linking internal innovation with external impact.

Today, MSLs are no longer confined to scientific education. They are strategic advisors, insight generators, digital communicators, and catalysts of trust between the pharmaceutical industry and the healthcare ecosystem. Their contributions now span early clinical development, market access, evidence generation, medical strategy, and long-term therapeutic value communication (1,2).

As we look toward 2035, this evolution is set to continue at speed. Generational shifts, technological acceleration, and societal expectations are redefining leadership across Medical Affairs. The MSL of the future will not only interpret science but also shape the systems through which it is delivered. Understanding the historical foundations and anticipating the next wave of transformation is therefore essential.

This article traces the multidecade evolution of the MSL role through five key lenses:

1. Historical and regulatory foundations.
2. Strategic expansion in the digital era.
3. The impact of generational diversity on competencies.
4. A forward-looking vision for MSLs in 2035.
5. Strategic recommendations for organizations.

2. Historical Foundations: From Education to Scientific Credibility

In the late 1960s and 1970s, the pharmaceutical industry began to decouple promotional activities from scientific communication. MSLs were introduced to respond to a clear need: engage clinicians in peer-level scientific dialogue without the commercial bias of sales (6). Equipped with advanced degrees—MDs, PharmDs, PhDs—these professionals brought scientific rigor to stakeholder engagement.

Several key developments during this era shaped the MSL’s early responsibilities:

- The FDA introduced stricter promotional and labeling regulations (6).
- The rise of blockbuster drugs created new demands for medical engagement.
- Globalization required tailoring of evidence across geographies and systems.

This era defined the MSL’s ethical DNA: evidence-based communication, regulatory alignment, and scientific neutrality.

3. The 2010s–2020s: Strategic Expansion and the Digital Catalyst

By the 2010s, the MSL had become a linchpin in the strategic expansion of Medical Affairs. Their scope expanded beyond data dissemination to include early insight generation, advisory board leadership, cross-functional collaboration, and lifecycle evidence planning (1). The growing emphasis on value-based healthcare demanded that MSLs participate in discussions around RWE, health economics, and patient-centered outcomes (2).

Key accelerators of this transformation included:

- The adoption of RWE as a decision-making driver (2).
- Greater involvement in clinical trial design, protocol development, and site selection.
- Strategic alignment with Market Access and Policy teams.

Then came the COVID-19 pandemic—a seismic catalyst. Within months, traditional field visits gave way to digital engagement. Virtual advisory boards, remote scientific meetings, and AI-enhanced customer relationship management systems became the norm (4).

MSLs responded by developing new capabilities:

- **Digital fluency**: mastering virtual platforms like Veeva Engage and Zoom for HCP interactions.
- **Omnichannel communication**: delivering content tailored to stakeholder preferences.
- **Dashboard storytelling**: transforming complex data into actionable insights through visualization.
- **Emotionally intelligent virtual rapport**: building trust in a remote environment (4,5).

By 2023, over 70% of global pharmaceutical companies had implemented AI-driven field medical platforms, reflecting a new model of digital-hybrid engagement (4).

4. Generational Influence on MSL Competencies

Generational diversity has played a key role in shaping the competencies and leadership styles of MSLs over time:

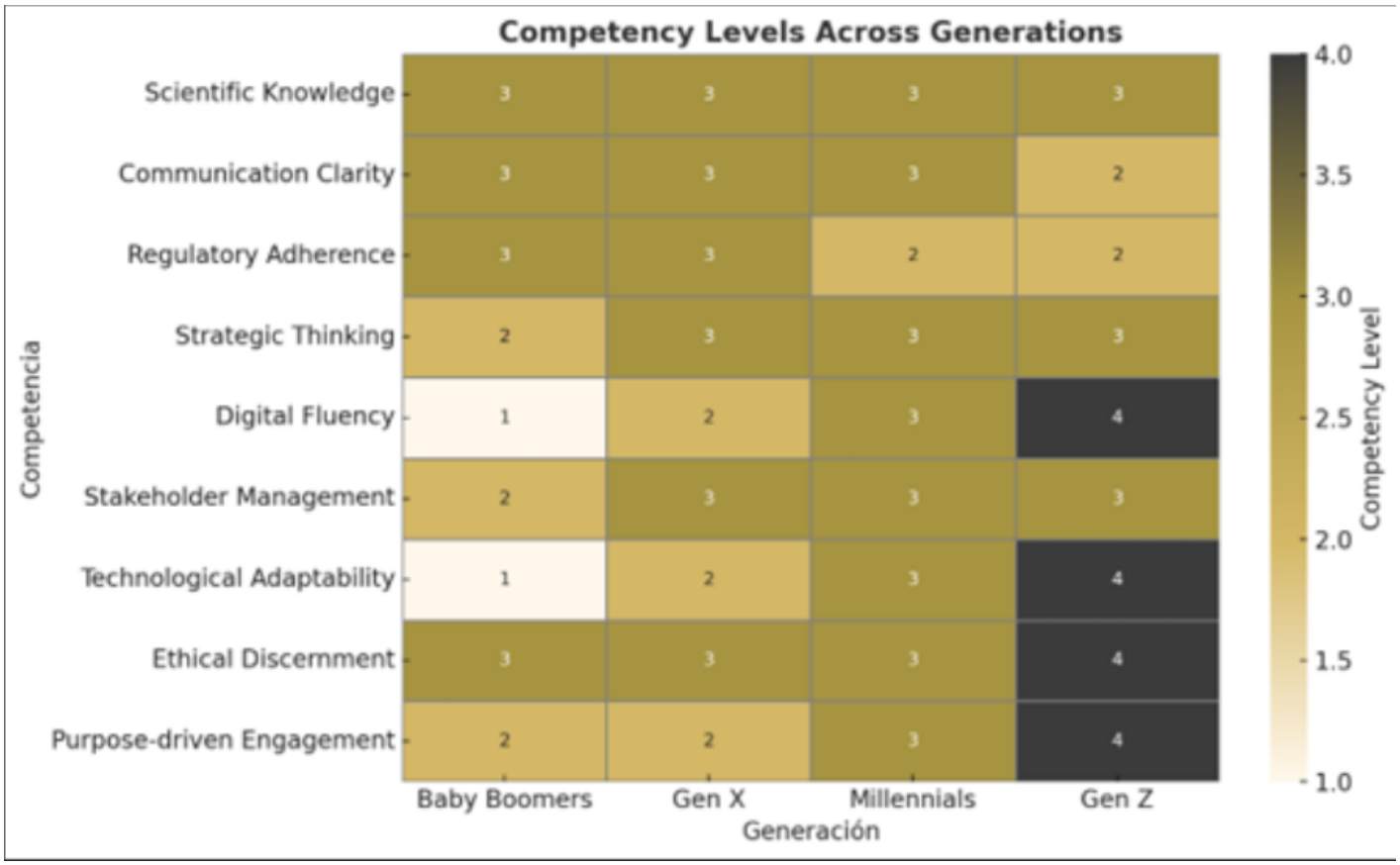

Table 1. competencies and leadership styles of MSLs over time

- **Boomers (1946–1964)** instilled ethical discipline, deep scientific expertise, and respect for compliance frameworks (6).
- **Generation X (1965–1980)** introduced strategic integration, cross-functional adaptability, and process efficiency (10).
- **Millennials (1981–1996)** brought collaboration, digital agility, and a purpose-driven mindset (3).
- **Generation Z (1997–2012)** expects authenticity, inclusivity, and innovation aligned with social impact (3).

This diversity is a strength—but only if managed intentionally. Future-ready Medical Affairs teams should implement:

- **Reverse and cross-generational mentoring programs**. =
- **Personalized learning journeys based on generational styles**.
- **Inclusive leadership frameworks that bridge mindsets**.

According to MAPS (11), organizations with cross-generational teams outperform in innovation, adaptability, and retention.

5. Vision 2035: From Scientific Exchange to Strategic Co-Leadership

Looking ahead, the MSL of 2035 will function as a **systems-level leader**, driving health innovation from within and beyond the traditional pharmaceutical model. Their role will blend data science, stakeholder mapping, ethical foresight, and policy navigation.

Core Competencies for 2035:

To lead in this new era, MSLs must evolve from subject matter experts to multi-dimensional leaders. The competencies required are integrative and cross-functional:

Fig 1 Core competencias 2035

1. Data-Driven Decision-Making
   Interpret clinical data, RWE, biomarkers, and AI-generated insights to personalize engagement and inform strategy [2,6].
2. Strategic Foresight
   Anticipate industry shifts and therapeutic opportunities through trend analysis and horizon scanning [5].
3. Ethical Digital Engagement
   Navigate digital environments responsibly addressing misinformation, AI bias, and privacy concerns [4,10].
4. Health Systems Fluency
   Understand health policy, reimbursement models, and equity frameworks to engage policymakers and payers effectively [7,8].
5. Purpose-Driven Communication
   Translate science into compelling narratives that resonate emotionally and ethically across diverse audiences [3,9].
6. Leadership Without Authority
   Lead through influence—building alliances, fostering trust, and enabling collaboration in matrixed teams [10,11].
7. Intergenerational and Cultural Agility
   Adapt communication and mentorship styles to accommodate diverse generational values and global cultures [3].

“Scientific expertise will remain essential, but strategic empathy and systems fluency will define MSL leadership in 2035.” – Piliero (6)

Strategic Imperatives for Organizations:

- Embed AI-powered learning ecosystems (5).
- Establish dual-career paths for scientific and strategic leadership.
- Align Medical Affairs goals with the WHO and SDG health frameworks (11).
- Extend MSL engagement to include regulators, policymakers, and patient leaders.

The MSL of 2035 will not only engage with data—they will co-create the future of healthcare.

6. Conclusion: Reimagining the MSL Role for the Next Decade

As innovation accelerates, the need for credible, strategic, and ethical medical engagement becomes paramount. The MSL has transitioned from educator to influencer—and is now evolving into a **scientific architect** of health system transformation.

This evolution must be accompanied by investment in talent, tools, and transformation. Organizations that champion the next generation of MSLs will gain more than compliance—they will gain trust, impact, and leadership in a competitive global landscape.

The future of Medical Affairs is not a distant concept—it is being built now. MSLs must be equipped not only to **understand change** but to **lead it**.

 Invest in **mentoring** and **cross-generational development**.
 Build **hybrid competencies** in science, systems, and digital.
 Align MSL strategy with broader societal and ethical goals.

The Medical Science Liaison of the future is already here, curious, connected, and committed to making science matter.

Author’s Note: This article was conceptualized and written by Martina Riosalido, MSc, with the support of natural language processing tools such as ChatGPT, which were used to structure the content, refine scientific communication, and align with recent international references. All content has been reviewed, validated, and adapted by the author to reflect her professional expertise and strategic vision for the MSL role.

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Martina is the founder of MSL Expert & Mentoring, a strategic mentoring and training initiative designed to support the development of Medical Science Liaisons and Medical Affairs professionals across the pharmaceutical and biotech industries. With over 18 years of experience in scientific engagement, medical strategy, and international leadership, she is the creator of the proprietary MARIPOSA Method®, focused on transforming individual potential into strategic, purpose-driven talent. Her work bridges science, communication, and ethical leadership to empower the next generation of MSLs.

Tactics, Strategy, and the Heart of an MSL

By Paula Evans, MD | Summer 2025

One of the most common phrases I heard from my professors at medical school at the Universidad de Caldas, in Manizales, Colombia, was “He who only knows about medicine, knows nothing.” This was a widespread sentiment among my mentors, teachers, and colleagues, promoting splitting our studies with learning about other areas that enrich our culture, stimulate our brains in a different way, and overall make us better people.

Reading is possibly one of the most relaxing pastimes I can think of. Poetry hasn’t been my go-to, but there’s a poem by Mario Benedetti, originally in Spanish, that’s always summed up what being an MSL means to me.

Quick anecdote: I was in a play in high school called “El Lado Oscuro del Corazon” (The Dark Side of the Heart) based on Benedetti’s poems. I’ve never been one to lean towards poetry, but his poems felt very simple and beautifully articulated. Simple, transparent, and very straightforward. Safe to say acting ended in that one try, but his art stuck with my brain and echoes when I dig deep for comfort or simply the softness of words.

There’s an English version published in the LA Times, translated by Chris Kraul, that conveys the message perfectly, and here we begin our short stroll through poetry memory lane:

Tactics and Strategy

My tactic is to look at you
To learn how you are
Love you as you are
My tactic is to talk to you
And listen to you
And construct with words

An indestructible bridge
My tactic is to stay in your memory
I don't know how
Nor with what pretext
But stay within you
My tactic is to be honest
And know you are too
And that we don't sell each other illusions
So that between us there is no curtain or abyss
My strategy instead is
Deeper and simpler
My strategy is that someday
I don't know how, nor with what pretext
That finally you need me

Setting aside the romantic purpose of this beautiful text, let's look at it through the Medical Affairs "In The Field" Lens.

Let's break it down into paragraphs:

"My tactic is to look at you
To learn how you are
Love you as you are"

Our first step when we're going to engage with an external stakeholder is to make sure we've done our due diligence. We look at them, research their publications, dive into their influence map, see who resonates with them, even try to learn about their likes and dislikes, and prepare the scene as best as we can for an open and valuable interaction.

But "Love you as you are" translates through our lens to appreciate exactly the person as they are. Receive what little or much they will share with us and build upon it. We prepare the terrain, yes, but we have a soft, fertile land to plant what they will give us to grow.

After taking these first steps, we move on to the actual interaction, the moment of connection:

"My tactic is to talk to you
And listen to you
And construct with words
An indestructible bridge"

We listen, we speak, and through a heartfelt open listening process, we allow words to take over and build bridges of trust. Of knowledge. Of value and of respect. And, of course, ethical and compliant bridges. Those bridges that will allow multiway and multichannel traffic of input and insights, science, and humanity.

The weight those words will carry can be greatly influenced by the accuracy, transparency, and balanced nature of our dialogue, so we move to the next paragraph:

"My tactic is to be honest
And know you are too
And that we don't sell each other illusions
So that between us there is no curtain or abyss"

To be honest, to share science in a balanced and unbiased manner. Convey information knowing that honesty, transparency, and scientific solidity are the best way to improve outcomes for patients, because when science is on your side, you fuel yourself to keep going on and deliver your best. Any step away from that creates "curtains" or an "abyss". Once trust is lost, it's not easy to recover in the MSL landscape.

Finally, and in a beautifully poetic manner, to explain how tactics build a strategy, which is our goal:

"My strategy instead is
Deeper and simpler
My strategy is that someday

I don’t know how, nor with what pretext
That finally you need me”

Through knowledge, science, honesty, and trust, the endgame is to finally be the “go-to” person when our area of expertise comes to the conversation. Just hearing the therapeutic area or drug will bring to mind and know that any doubt, concern, anecdote – even an AE report – can be directed your way, and it will be taken care of in the best manner.

When you become a regular source of value, you’ve mastered the art. You don’t need to know exact numbers, and humility with knowledge is one of the most beautiful approaches to learning.

I’d never expected to have tied one of my favorite poems to one of my most life-changing roles professionally. But living each one of those strategies, diving into the MSL role to understand its core, more than to superficially thread through it, connected me to my older formative memories and gave some art to my day-to-day life. Each day, I’d hear those words in my head, feel them in my heart, motivate myself to honor them, and enjoy the delicate intricacies of human interaction.

Perhaps, as you finish reading, a small part of this might linger in your memory and echo in a conversation that builds you a bridge that lasts for a lifetime.

About the author:

Paula Evans, MD

Colombian expat based in Seattle, WA. Medical Doctor and Clinical Epidemiologist with over 10 years of experience in the pharmaceutical industry, including roles as MSL and Clinical Safety Scientist at Sanofi, Novo Nordisk, Grunenthal, and Merck Sharp & Dohme, working across Medical Affairs and Global Safety in clinical trials.

Currently—and proudly—she holds the title of mom of five, advocate for children living with disabilities, coffee enthusiast, private consultant, and most recently: writer.

Powering Clinical Development: Three Levers Medical Science Liaison Teams Can Pull to Supercharge Clinical

Trial Recruitment

By Cathy Andorfer, PhD | Summer 2025

Why the need to supercharge? Because traditional clinical trial recruitment strategies may not be enough in 2025.

The challenges of clinical trial recruitment have long been a pain point in the pharmaceutical and biotechnology industries. With increasing complexity in trial designs and heightened competition for trial participants, Medical Affairs Organizations and specifically their Medical Science Liaisons (MSLs) are positioned to play a pivotal role in transforming recruitment strategies in partnership with their clinical operations colleagues. By leveraging data analytics, real-world evidence (RWE), and innovative engagement methods to raise awareness for studies, MSLs have been shown to significantly enhance trial outcomes.

The Growing Recruitment Challenge

Clinical trial recruitment has become increasingly difficult, with data showing concerning trends:

- The average recruitment period for phase 3 trials increased from 13 months (2008-2011) to 18 months (2016-2019)1
- The average number of participants enrolled in these trials dropped from 26 to 20 during the same period1
- Historically, more than 30% of rare disease trials fail, with the largest reason being enrollment delays2

Multiple factors continue to contribute to this crisis: Broad geographical distribution of patients, lack of awareness, burdensome enrollment criteria, and increasing competition between trials.

MSLs are uniquely equipped to address these challenges. Not only do they understand complex clinical trial protocols, but they also have invaluable knowledge of local healthcare provider (HCP) dynamics to help drive patient flow to trial sites. MSLs can help mitigate these barriers by serving as the connectors between HCPs, potential trial participants, and the trial sites themselves.

MSLs can supercharge clinical trial recruitment through three levers.

1. **Lever #1: Leveraging Real-World Data and Artificial Intelligence for Enhanced Recruitment**
   The integration of real-world data (RWD) and artificial intelligence (AI) has unlocked new possibilities for identifying eligible patients and optimizing HCP targeting. By analyzing claims data, demographic information, and clinical features, AI tools can support MSL clinical trial efforts to
   - **Identify Potential Patients:** Analyze inclusion and exclusion criteria to segment patient populations
   - **Score and Segment HCPs:** Rank HCPs based on their likelihood of referring eligible patients
   - **Map Trial Sites to HCPs:** Ensure that patients and HCPs are within reasonable proximity to trial sites, reducing logistical barriers
2. **Lever #2: Leading Strategic Engagement With HCPs to Support Clinical Trial Recruitment**

MSLs play a critical role in fostering HCP engagement directly related to clinical trial recruitment. Key strategies include

- **Prioritized Outreach:** Focus on HCPs managing high volumes of eligible patients that have been identified by RWD
- **Educational Resources:** Equip HCPs with clinical trial information decks, onboarding videos, and patient brochures to raise awareness and understanding of the trial
- **Collaborative Relationships:** Build trust by aligning trial goals with HCP interests and addressing barriers such as negative perceptions and complex protocols
- **Streamline Communication:** Ensure a single point of contact on clinical trial progress for each key opinion leader (KOL) to enhance collaboration and reduce redundancies
- **Diversify Engagement:** Regularly update and expand the KOL network to include emerging leaders who may be interested in being trialists

3. **Lever #3: Understanding HCP Networks to Support Recruitment**
The importance of HCP networks to feed clinical trials cannot be overstated. A “clinical network” in the context of clinical trials refers to a group of HCPs who can actively identify and refer eligible patients to participate in clinical trials. MSLs should

- **Localized Support:** Connect trial sites with nearby HCPs for seamless patient referrals
- **Centralize KOL Profiles With Connections:** Maintain comprehensive, accessible records of KOLs, including HCP connections and referrals, expertise, activity, and trial contributions
- **Assess HCPs With Relevant Networks:** Use RWD and AI to identify the most influential HCPs with networks that include potential eligible patients

CASE EXAMPLE: An MSL utilized RWD analytics to identify an HCP who was practicing in a completely different specialty, 50 miles from the trial site, who had eligible patients for the trial. This discovery, enabled by data, demonstrated the untapped potential in unconventional locations that would not have been found through traditional MSL field intelligence.

Conclusion

Medical Affairs organizations and their field medical teams stand at the forefront of revolutionizing clinical trial recruitment. By leveraging advanced analytics, fostering strategic partnerships, and embracing innovation, they can overcome traditional barriers and enable trial success. The future of clinical research depends on adaptive, proactive strategies, and MSLs are the key to not just unlocking but driving this potential.

Note: The content contained herein represents the personal views of the author and not necessarily those of Tourmaline Bio, Inc.

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Cathy Andorfer, PhD

Cathy Andorfer, PhD, is a dynamic leader with a career spanning science, leadership, and community engagement. She currently serves as National Director of Field Medical at Tourmaline Bio, Inc., leading a team of Regional Medical Directors. Previously, she built and led a national field team at Bristol Myers Squibb, driving successful product launches and cross-functional collaborations. She has been in the medical affairs space since 2011.

She recently published “The Art of Excellence: Build a Rockstar Career as a Medical Science Liaison and Beyond” a career guide that combines common-sense advice and engaging stories from Dr. Andorfer’s experiences as an MSL for large and small companies, as a leader of MSL teams, and as someone who mentors other MSL leaders.

A sought-after speaker, mentor, and coach, Cathy frequently shares insights on career growth, leadership, and professional development through industry conferences, podcasts, and panel discussions. She blends strategic vision with a passion for empowering others.

Her global perspective is shaped by research and capacity-building initiatives in Tanzania, where she led training programs and cross-cultural collaborations, strengthening her adaptability and leadership.

Beyond science, Cathy is a creative artist who integrates artistry and innovation into her work and leadership approach. She believes in the power of creativity, science, and leadership to drive meaningful impact.

Cathy holds a PhD in Neuroscience from Albert Einstein College of Medicine, an MS in Biology from Notre Dame, and a B.S. in Biology from Binghamton University. Before transitioning to industry, she completed a postdoctoral fellowship at the Seattle Biomedical Research Institute and held faculty positions at the Mayo Clinic Jacksonville.

Daniel Leszkiewicz, PhD

Daniel is a seasoned expert in brand and commercial strategy, advanced analytics using claims data, and leveraging AI to drive success in biopharmaceutical companies. He oversees the identification of community-based clinical networks and influential healthcare providers through the proprietary Plexus solution, while also leading the discovery of global academic thought leaders using traditional bibliometric search strategies.

With extensive global experience across both common and rare disease states, Daniel has supported sales, marketing, and medical teams within biopharmaceutical companies. His career began over 2 decades ago, supervising the creation of promotional medical education initiatives for primary care and specialty audiences, delivered through various peer-to-peer educational channels. Daniel's expertise extends to designing and supporting innovative promotional programs tailored to diverse healthcare professionals.

Daniel holds a PhD in Neurobiology from the University of Pittsburgh School of Medicine and completed a postdoctoral fellowship in the Department of Pharmacology at University College London, funded by the National Science Foundation.

The MSL AI Connection: Delivering Impact, Enhancing Value Now and Into the Future

By Jeffery Vaughan, PharmD | Summer 2025

The strategic value MSLs offer to therapeutic areas is without question. Yet, tapping that value is dependent on how effective MSLs are in reaching, educating, and satisfying their physician targets. These efforts can offer a significant challenge considering the time constraints on today's HCPs/KOLs. It is, therefore, not surprising that a recent global survey by First Word Pharma across several therapeutic areas, found that overall, physicians would like their MSL interactions to occur only when there is some new scientific or medical information to share, and 46% of them would prefer the information shared be aligned to their specific needs.[1]

In addition to having strong interpersonal skills, MSLs must be extremely efficient to properly address these high impact activities in balance with administrative territorial demands and internal collaboration with cross-functional teams. However, what has been an enormous burden, potentially undermining the effectiveness of the MSL, is now much more manageable when supported by AI. This MSL AI connection is offering MSLs the opportunity to harness technology to deliver targeted, complex scientific information, quickly delivering impact and enhancing their value.

AI training for MSL Interaction with KOLs

Hitting the ground running is important to the success of any MSL. However, traditionally, it can take a year for MSLs to feel fully comfortable in their role, and even longer for them to be totally confident. One of the biggest challenges MSLs face during that first year is gaining enough experience with scientific exchange and KOL interactions to achieve the necessary readiness and confidence they need to be effective. Enter AI.

In using an AI-based simulation training tool that mimics MSL/KOL interaction in real time, you can help shorten that learning curve by allowing new MSLs to practice their conversations in a reassuring, AI-driven environment. Instead of waiting to accumulate thousands of hours through live KOL engagements, MSLs can build those foundational skills more efficiently by rehearsing with an AI KOL, learning how to ask the right open-ended questions to garner better medical insights, and gaining confidence. Such interaction leads to earlier field readiness, more effective scientific exchange, and leaves a stronger impression with key stakeholders – all ultimately increasing the value MSLs can deliver in a shorter timeframe.

AI accelerating engagement

The key to MSL success is the ability to deliver timely scientific engagement and do so, addressing the specific needs of the KOL target. AI can be instrumental in both. AI systems are now being utilized in pre-call planning, helping the MSL understand an HCP/KOL's background, research interests, and influence so that the scientific exchange can be tailored to that particular HCP/KOL.

MSLs can use generative AI chatbots to assist them in literature review, using it to summarize peer-reviewed articles quickly, and compare and contrast studies, such as examining two publications across patient population, study design, safety, efficacy, secondary outcomes, etc. Other AI tools can efficiently uncover insights, monitor competitive landscapes, and find high-value publications. AI can also help Medical Affairs create flashcards to study new information. What used to take valuable time out of the field for locating new literature can now be done quickly, thereby allowing the MSL more time to build trust with HCP/KOL targets by presenting the latest literature on a disease state.

In addition to this direct use of AI tools by Medical Affairs, AI is also playing a significant role in the generation of medical content used by Medical Affairs. Based on the tracking of inquiries and insights to identify trends and prioritize the creation of materials to meet emerging needs, and working with RWE, sub-analyses, or investigator-initiated studies, AI can accelerate the creation of critical content by medical communications. This ensures high-quality, compliant, impactful content at scale that can be used in the field. Since timely content development is often a rate-limiting step for MSLs, this tool has significant potential to support sustained KOL engagement and relationship-building.

AI reducing the administrative burden

The industry has long recognized that MSLs spend too much time with administrative tasks, time that would be much better spent in scientific engagement. Items such as scheduling, expense reporting, CRM entry updates, email summaries, and even slide curation by medical communications can be addressed by AI tools. AI is also being used currently to analyze medical insights and generate field-activity reports and emails, providing leadership with important updates on what is occurring in the medical community. Such reports/outputs include:

- **Quantitative metrics** – illustrating total KOL engagements, new vs. existing contacts, and territory coverage.
- **Qualitative summaries** – elucidate the top three emerging themes/insights from the territory, recommended actions, and provide competitive intelligence.
- **Visuals** – provide maps and dashboards showing engagement volumes, insight density, and sentiment by region or therapeutic area.
- **Next steps** – AI-generated prioritized action items and follow-up plans based on call results.

This ability to lessen the administrative load on the MSL is critical to the role's future. In drawing upon AI tools, the end results to be gained are:

- **Efficiency** – AI reduces time spent drafting routine reports so the MSL can invest more in high-impact activities.
- **Consistency** – The use of AI in report generation leads to standardized, data-driven reporting across the team against which team members' efforts can be measured and evaluated.
- **Early detection** – AI enables real-time insight generation, which helps to identify trends or gaps faster and allow for appropriate course correction.

Where do we go from here?

Everyone is talking about the possibilities that AI represents and how it can improve the value of MSLs by creating efficiencies in

their day-to-day workload. It is already proving to be quite effective in supporting many tasks. As the industry continues to learn about how to best use this powerful technology, one thing is certain. AI can assist MSLs, but it cannot replace them. HCPs and KOLs still look for, and respond to, that personal engagement that an MSL offers in discussion of complex scientific and medical information. AI, rather, can perform the role of a silent partner to augment MSL performance and productivity, helping to support tasks and accelerate impact.

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Jeff, a seasoned professional with 20+ years in healthcare and pharmaceuticals, leads Medical Affairs at Inizio Engage, focusing on Medical Science Liaisons. With over 18 years in the field and director-level MSL roles, he supports initiatives in Immunology, Infectious Disease, and more. Jeff’s expertise has led to authoring articles and podcasts, solidifying his status as an influential thought leader in the industry.

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Tiffanie, with nearly 14+ years in clinical research and medical affairs, excels in simplifying complex healthcare issues with data-driven solutions. Her expertise spans various therapeutic areas and industries, including FDA-regulated drugs and laboratory-developed tests. Leading MSL and Medical Affairs teams, she pioneers innovative solutions for enhanced MSL excellence at Inizio Engage.

The Role of Data-driven Insights in Shaping Impactful KOL Engagement for MSL Teams

By Jyoti Vaidya | Summer 2025

As a Medical Science Liaison (MSL), identifying relevant Key Opinion Leaders (KOLs) in a sea of credentials, publications, and affiliations is a nuanced challenge In a role where scientific engagement drives strategic success, finding and connecting with the right key opinion leaders isn't just a core responsibility; it's central to meeting the set objectives.

But relying on word-of-mouth referrals, superficial data tools, or outdated contact lists no longer cuts it. The stakes are higher, and so is the volume of data available. From publication history and clinical trial involvement to speaking engagements and social media influence, KOL data is richer and more accessible than ever before. But making sense of it and using it to establish meaningful engagement is where the real challenge lies.

This article explores why and how MSLs should leverage modern technological tools to gain actionable insights into the HCP landscape, identify the experts who truly matter, and align their engagement strategies with broader company objectives.

Traditional KOL Engagement Methods DO Fall Short

Until recently, KOL identification was driven by networks and internal referrals. In many cases, information was fragmented. A medical science liaison might know a physician's publication history but not their clinical trial affiliations or speaking engagements. This incomplete view led to surface-level engagements rather than strategic partnerships. These methods lacked diversity, missed emerging experts, and carried the risk of bias.

Moreover, with traditional methods, teams often find themselves spending more time searching for the relevant KOLs than actually building relationships and executing impactful strategies with them. This inefficiency not only delays engagement but can dilute the effectiveness of scientific exchange.

With therapeutic landscapes becoming increasingly competitive, the cost of missing the right voice or engaging at the wrong time has risen significantly.

The Rise of Data-Driven KOL Strategy

Data analytics has transformed the way MSLs discover, understand, and engage with HCPs. It’s not just about pulling names from a database; it’s about understanding the full professional journey of experts: where they speak, what they publish, who they collaborate with, and what they advocate for.

Access to organized, data-driven insights helps bring clarity. Rather than scanning multiple sources, MSLs can access a ready list of HCPs whom they can focus on for potential engagement and drive their objectives forward.

2. Getting to Know KOLs Beyond the Resume

A strong publication record matters—but it’s only one part of the story. Understanding what a KOL is actively exploring, speaking about, or contributing to in real-time makes the difference between a generic interaction and a meaningful exchange. With integrated insights that reflect recent activity and engagement preferences, MSLs can approach conversations in a way that feels informed, relevant, and respectful of the KOL’s evolving interests.

3. Keeping Pace with a Moving Landscape

Scientific influence isn’t static. It grows, shifts, and sometimes fades. A leader in a therapy area today may pivot focus tomorrow, while a new voice gains traction through trials, publications, or digital presence. Tools that offer dynamic tracking of these changes allow MSLs to stay current without constant manual updates.

For example, if a KOL presents new findings on a biomarker at a recent oncology conference, an MSL working in a related area doesn’t need to wait months to engage. With timely insights at hand, they can initiate a relevant conversation within days while the data is fresh and the interest is high.

These moments when scientific momentum is at its peak offer unique openings for connection. Being able to recognize and act on them in real-time turns passive observation into meaningful dialogue.

4. Connecting Insights Across Teams

Insights gathered by MSLs can have ripple effects across medical affairs, clinical development, and commercial teams. But siloed systems make it hard to share learnings efficiently.

Modern KOL analytics platforms provide centralized dashboards and collaborative features, enabling a unified view of engagement history, strategic alignment, and follow-up actions. This transparency supports continuity, compliance, and informed planning. This further allows MSLs to contribute more effectively to advisory boards, trial design, and launch planning. It’s a more connected approach that brings value across functions.

5. Measuring Strategic Value

One of the most meaningful changes brought about by data-driven tools is the ability to understand whether MSL activities are truly making an impact. It’s no longer just about counting meetings or logging interactions. Now, MSLs can see how many of their engagements are with KOLs whose work aligns with the brand’s strategic direction—and how those conversations contribute to broader scientific and clinical efforts.

Over time, these insights help answer deeper questions: Did a particular interaction lead to a KOL joining a clinical trial or participating in an educational forum? Did they go on to contribute to a publication or advisory board? This kind of information isn’t about putting a number on a relationship—it’s about making sure the time and effort invested are helping move the needle in ways that matter to both science and strategy.

Technology is a Partner, Not a Replacement

Despite the promise of AI and analytics, it’s worth remembering: data doesn’t replace human connection, it amplifies it. No algorithm can substitute the trust built through one-on-one conversations. But when paired with data, MSLs can walk into these conversations better prepared, more relevant, and more respectful of the KOL’s time and expertise.

The Future Belongs to Insight-Led Engagement

Life sciences teams are under more pressure than ever to demonstrate value, both internally and externally. With limited time in the field, increased compliance demands, and growing competition, MSLs must work smarter, not harder.

Data analytics is not a passing trend. It's the engine that drives smarter science conversations and more strategic relationships. MSLs who embrace this approach will not only meet their objectives faster, but they'll also help raise the bar for how the industry engages with the clinical experts shaping tomorrow's medicine. Because when you connect with the right people, at the right time, for the right reasons, everyone wins. Especially the patients we serve.

About the author:

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Jyoti Vaidya is a content specialist at Aissel Technologies, focusing on creating scientific and medical content tailored to Medical Affairs, HCP engagement, and healthcare analytics. With a degree in life sciences and a master's in English, Jyoti combines subject expertise with a thoughtful approach to communication, delivering informative and engaging content.

Strengthen KOL Relationships Through Customized Interactions and Open Scientific Exchange

By Christoph Bug, MD, PhD, MBA | Summer 2025

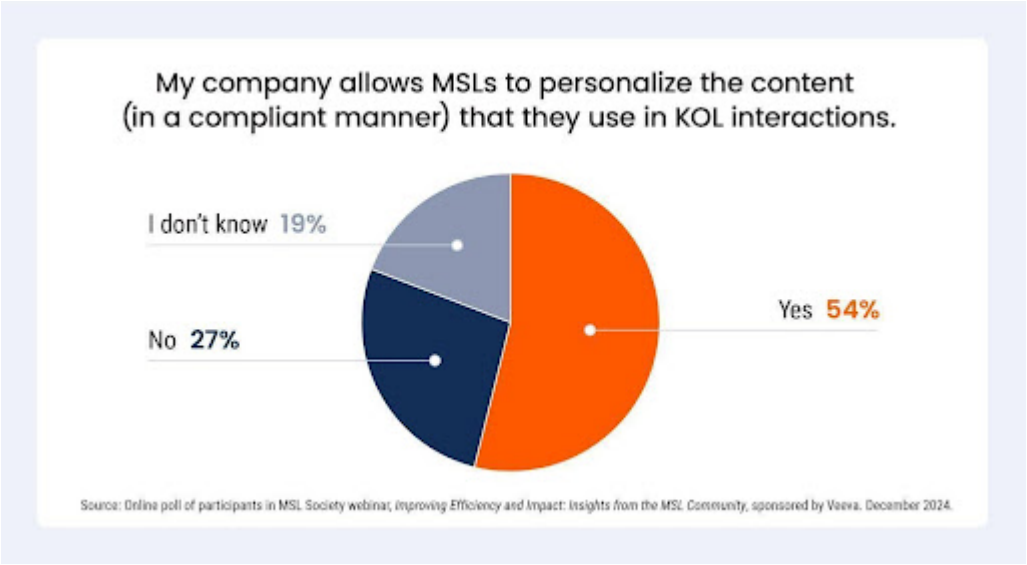
In a survey of key opinion leaders (KOLs), 94% agreed that scientific exchange between clinical experts and biopharmaceutical companies is becoming more important. While this is positive for medical affairs, resources don't always go hand in hand with demand. As the global head of medical affairs excellence at a top 20 biopharma acknowledged at the Veeva Commercial Summit, "Deploying the same strategies and people across different assets and products is not sustainable, nor strategic. We have to be a nimble organization when it comes to engaging with our customers, we need to learn how to grow and evolve."

Medical teams are looking for ways to maximize their engagements and build on those valuable relationships. Recent Veeva surveys of field medical teams and KOLs indicate two ways to create highly impactful engagements: personalizing interactions and allowing field medical teams to share their scientific opinion for how they interpret the evidence they present and/or what that means for clinical practice. Both can help medical affairs maximize engagement with HCPs and increase efficiency. The report also identified factors that can limit field medical teams from putting these actions into practice, with new data that might be an impetus for some organizations to reconsider current strategies.

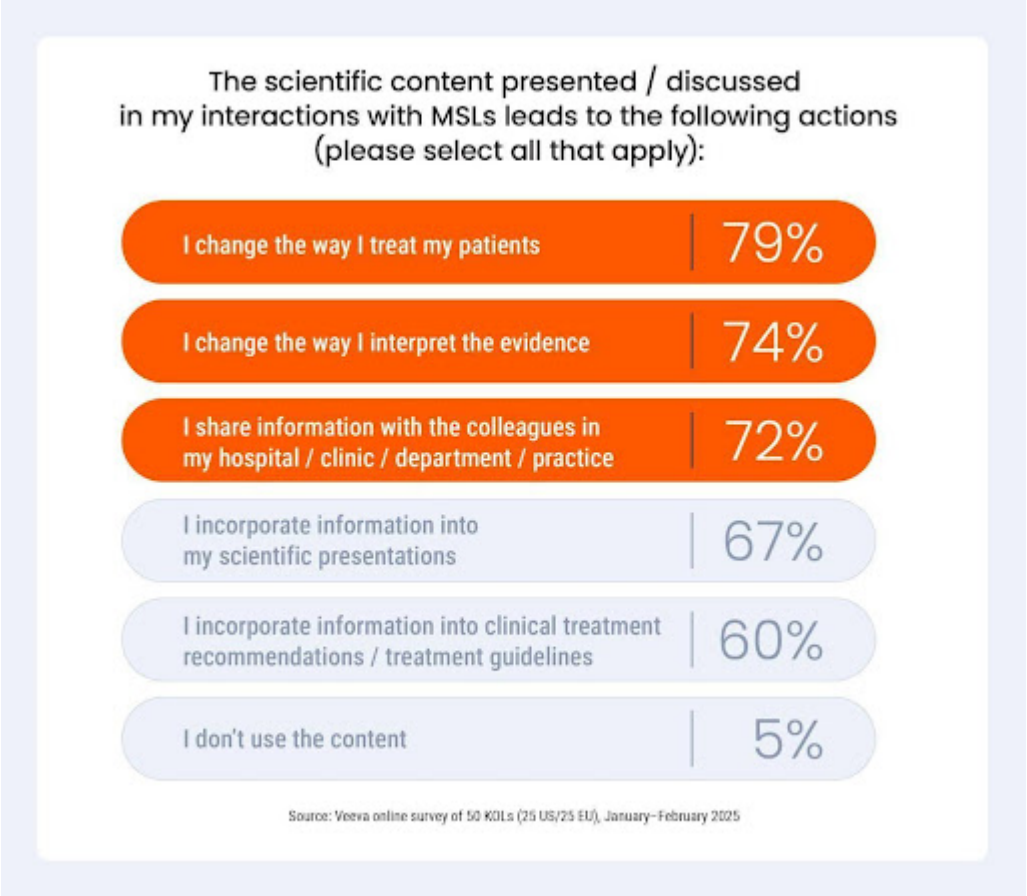
KOLs want tailored engagement

Most of us appreciate personalized recommendations and service. It's not surprising that 81% of KOLs say they want the same when it comes to medical content. A joint survey with the Medical Science Liaison Society (MSLS) and Veeva found that 97% of MSLs and their managers agree it's important to customize each engagement based on the KOL's interests, educational needs, and career objectives. Eric Toron, executive director, medical operations lead, global medical and scientific affairs at Merck, underscored, "One of the cornerstones of a great MSL is the ability to customize their engagements based on the totality of evidence coupled with the KOLs' needs."

While customized engagement seems to be the clear preference, 66% of KOLs say they experience different levels of customization amongst companies. This could be due to many factors out of the MSL's control. Some organizations tend to be stricter in limiting content customization to streamline rather than individualize. For example, in a poll during a recent webinar with MSLS and Veeva, only 54% of MSLs indicated that their company allows them to tailor the content they present, 27% stated they cannot tailor content, and 19% are unaware of options for customization.



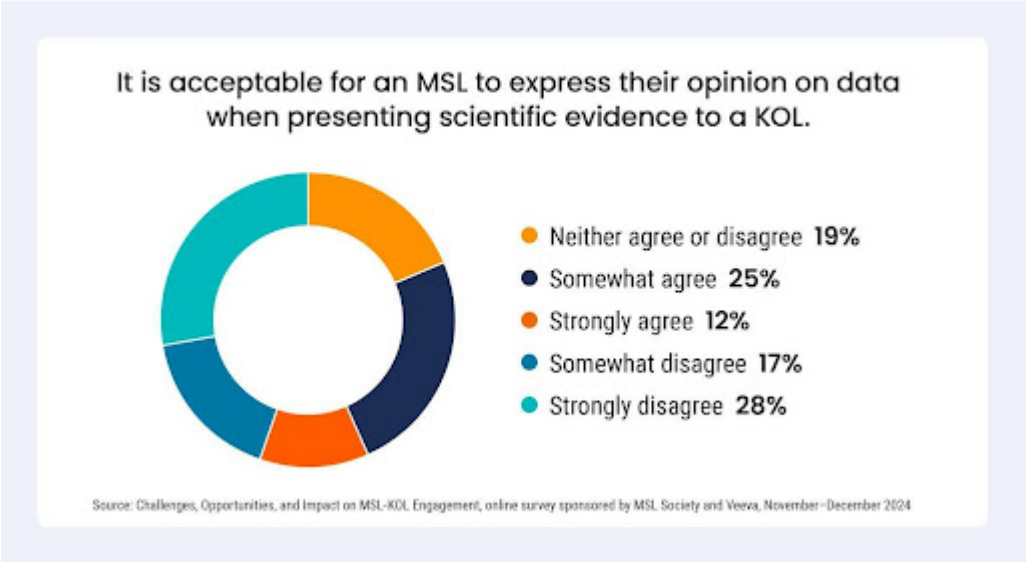
However, it's important to recognize that ensuring the right KOL receives the right content at the right time can have a real impact. The majority of KOLs say they take tangible action based on the scientific content presented to them.



This customized engagement is where omnichannel will become critical for medical affairs. The global head of medical affairs excellence at a top 20 biopharma points out, “We have an opportunity to build systems and structures that enable true omnichannel.” Building this foundation starts with segmenting physicians, understanding their needs, developing personalized content for individual personas, and creating tailored journeys. “If we establish the right foundation, then we can scale with our teams and make them more efficient,” he says.

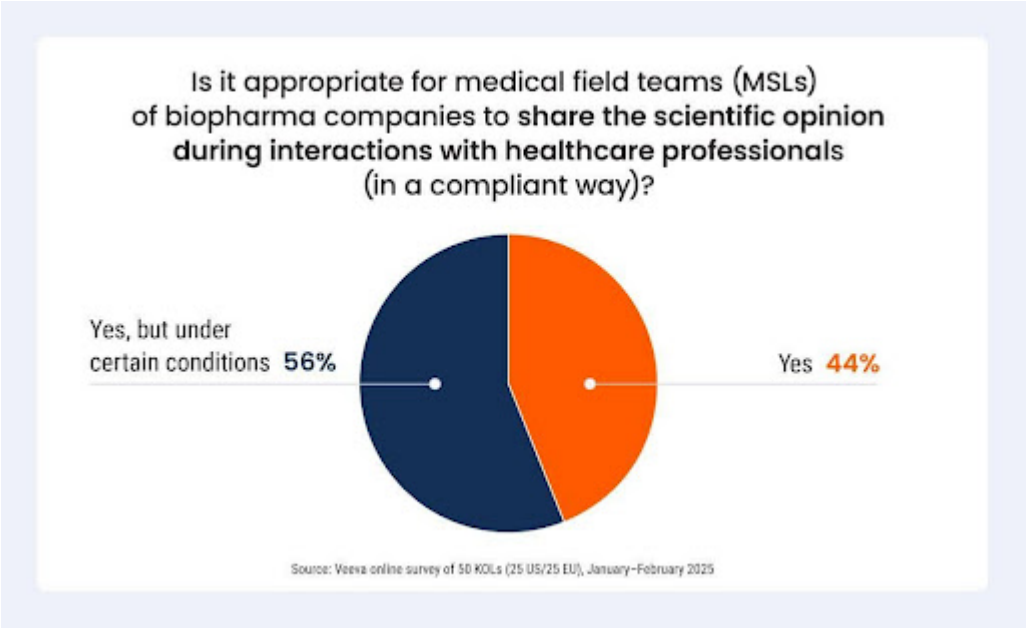
KOLs say it’s acceptable for MSLs to share scientific opinion

According to Veeva data, there’s a split in the industry among MSLs when asked whether it is appropriate for field medical teams to share corporate scientific positions (in a compliant way) with KOLs. Some MSLs say it’s critical in facilitating scientific exchange and partnership. Others view this practice as unacceptable, stating that it might inadvertently introduce bias.



Source: Numbers have been rounded for easy viewing.

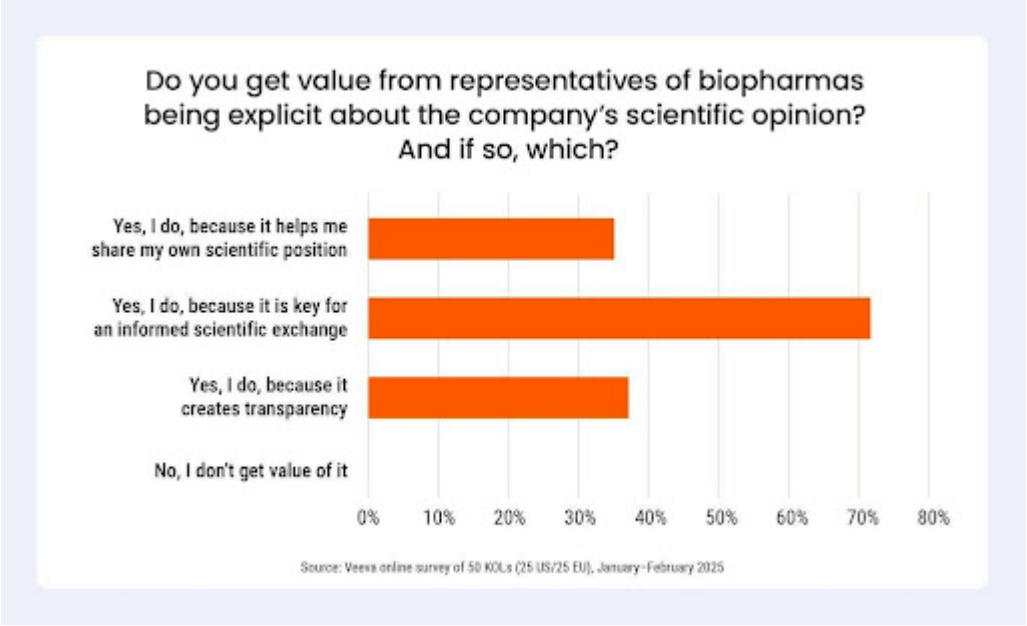
KOLs, on the other hand, unanimously agree that biopharma companies — field medical teams specifically — should share their scientific opinion.



When doing so, over half of the KOLs surveyed believe that MSLs should follow certain conditions — use a fair and balanced view, disclose all underlying evidence, only use scientific augmentation, and avoid marketing language.

Toron weighed in on this matter, “Two important qualities of an effective MSL is that they’re able to genuinely relate to the KOL and establish credibility based on their deep scientific expertise, both of which are difficult to accomplish unless you offer your scientifically-informed perspective on the data and the science.” Toron acknowledges that there needs to be a balance between the company’s perspective and the totality of the data , but says, “If you’re not able to express an appropriate informed and balanced perspective on what it is that you’re discussing, it’s a missed opportunity.”

Overall, KOLs find value in this information and feel it is key for an informed, transparent exchange that helps them form their own position.



Being a good partner to your KOLs means delivering constant value that translates into a high level of access and good scientific exchange. It also provides the opportunity to gather actionable insights. As Nimisha Rathod Shah, head, global field medical excellence, Johnson & Johnson Innovative Medicine, stated in the webinar with MSLS, "Sharing of scientific opinion allows for open discussion and introduces the right questions. If you don't have agreement or alignment with your KOLs, understanding why and where they have concerns ultimately enables a more interesting scientific exchange."

Conclusion

Start maximizing KOL relationships by putting into practice an omnichannel engagement strategy that utilizes personalized interactions and perspectives and opinions based on science and data.

The global head of medical affairs excellence at a top 20 biopharma encourages this approach. "The amount of scientific information that a physician has to digest in order to treat patients the right way increases every day. Medical Affairs, especially our field teams, bring credible, evidence-based information to physicians to help keep them up to date. This is where we become true partners and will continue to shine."

Sources:

Survey 1: Online survey of 50 KOLs (25 US, 25 EU), March 2025. KOL status qualified by participating in at least three activities: publishing in scientific journals, involvement in clinical trials, speaking at conferences, and contributing to guidelines.

Survey 2: Challenges, Opportunities, and Impact on MSL-KOL Engagement, online survey sponsored by MSL Society and Veeva, Nov-Dec 2024. Total of 317 responses from 39 countries. Responses cited in this report include Executive Management, Vice President of Medical Affairs, Manager/Director of MSLs (or equivalent title), MSL, Senior MSL, Medical Advisor (or equivalent title), and MSL Operations/Excellence/Training, Global Data.

About the author:

Christoph Bug, MD, PhD, MBA

Improving the Quality of Scientific Engagement With Key Experts Using AI

By Vic Ho | Summer 2025

Claims about AI are everywhere at the moment. LinkedIn seems to have been taken over by it. Co-pilot, Open AI, Claude, and numerous in-app AI options feel like the equivalent of the “talking paperclip” offering help that often does not live up to expectations. So, how do we separate the hype from the tools that can really support time management and, importantly, credibility as an MSL?

The utility of AI for what MSLs do every day is enticing:

Summarization: To support staying up to date with the latest scientific data and clinical practice trends

Connectivity: To keep pace with what HCPs and key experts are interested in, explore emerging trends, and discover new experts and networks to collaborate with

Efficiency: To streamline day-to-day activity flows and find efficiencies

Clarity of communication: To enhance communication with internal and external stakeholders through tailored content aimed at individual levels of understanding and focus.

Here, we would like to focus on the first two of those areas of AI application, and how they can support trust-filled MSL / HCP interactions as described by Maister’s “trust equation”(1):

Trustworthiness = (**Credibility** plus **Reliability** plus **Intimacy**) divided by **Self-Orientation**

Taking time to top-up personal scientific and clinical practice knowledge is a considerable investment. Traditionally, this may have been setting alerts on areas of interest within publication sites and company knowledge databases, and then receiving regular emails with lists of references to click on and read. Typically, these alerts quickly pile up unread, prompting a feeling of guilt about slipping behind the evidence base and even when time is found, it is usually limited to just reading the abstract or conclusions section. MSLs often ensure that they know the latest treatment guidelines for their therapeutic area by keeping notes on practices and data that support or contradict as they come up, but it is common to find that a personal note repository

becoming difficult to navigate (even if it feels reassuringly complete). Not having enough time to dedicate to this part of the role can erode an MSL's ability to demonstrate **credibility** and, in some extreme cases, make MSLs avoid opportunities for scientific exchange as they doubt the completeness and recency of their own knowledge.

Untrained or poorly constrained AI chatbots frequently produce citations that are not just irrelevant, but entirely fabricated, complete with convincingly realistic metadata that risks misleading even experienced readers (3,4). One evaluation found that over 60% of references lacked genuine relevance, and nearly half contained false DOIs, author names, or journal titles, exposing a serious vulnerability in the reliability of AI-generated citations, particularly in clinical and academic contexts (2,5).

These findings are unacceptable when patient safety relies on accurate and fully referenced information. So although these strategies feel like an incremental step forward in this area, often they require extra time to verify data sources and in some Large Language Model (LLM) answers this is not even possible as source data is not easily identified.

The solution in this case is twofold:

- **Isolate the types of data AI extracts from, to exclude unverified sources like non-expert opinion and unreferenced content**
- **Check IA provider disclosures for how LLM has been trained (including how it checks for and minimizes hallucination) before using it for this specialized summary type.**

Some Pharma and Biotech companies are pulling LLMs into their secure company environments and specifying the data sets for the first part, but then finding that the training of the AI is a complex and ongoing commitment that goes beyond just feeding the AI the right data. It's an intensive, continuous 'teaching' process whereby the AI iteratively refines its contextual understanding, chain-of-thought reasoning, and output generation, guided by expert human-in-the-loop (HITL) feedback to ensure accuracy and appropriateness.

When both these things are addressed correctly, these AI platforms can host not only peer-reviewed data curated to the MSLs' area of interest but also other trusted data sources, including internal Medical Affairs documents and gathered "insights". This allows the MSL to query across all data sources and prepare for upcoming conversations focusing on their own knowledge gaps and those of their HCPs for just-in-time preparation which improves scientific **reliability** Minimizing extra validation steps compared to generic LLMs(6).

Until such AI platforms become widely available, a top tip for MSLs using generic LLMs for research is to engineer prompts to suggest relevant, reputable public data sources and request hyperlinked references, always critically verifying all outputs. For non-public data, MSLs must exclusively use secure, company-approved internal tools within the firewall. Never input confidential company data into public AI tools.

Using AI to enhance connectivity involves being able to spot patterns of activity from individual HCPs. The information available online is only one aspect. Understanding the needs of a HCP and where they are already very knowledgeable might include accessing what they publish (peer reviewed and online commentary), what they say on a podium at a congress vs reveal 1:1 in conversations with Medical Affairs (MSL 1:1 or in groups / advisory settings) and how they request information through med info. The ever-changing nature of individual experiences makes staying current on this to maintain professional levels of **intimacy** an ideal application of AI. Layers of data security to protect privileged information that an HCP shares with the MSL and their company is paramount here, as is the appreciation of respectful documentation that is subject to audit and freedom of information requests if stored against the identifiable individual. The linkage of internal data sources is becoming increasingly common practice, and again, medically-trained AI is vital to summarizing insight accurately to avoid "putting words into the mouths of others".

Ultimately, those who use AI well to understand their HCPs will rise above the harmful effects of **self-orientation** to instead be able to engage confidently on the HCP (and therefore patient) need agenda. AI accessing these types of data can easily surface new names of individuals based on their interests, who MSLs can then connect into the network of HCPs and Experts they already work with, to increase diversity of thought and practice in their therapeutic area.

A final thought on why this matters to the individual MSL. As MSL-gathered "insight" becomes a part of the data repository that AI draws from, MSLs that are users of AI will have the deepest appreciation of what great source data needs to contain. As a result, they will see their own collected insight being referenced in strategic decision-making like never before. One of the most satisfying parts of the MSL role is being able to make a difference. The future of AI in this space is only truly unlocked by humans with the relationships to take action on the information it summarizes, and those humans are often MSLs.

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For MSLs, the Soft Stuff Is Now the Hard Stuff

By Jill Donahue, MadEd, HBa | Summer 2025

And How it Will Set You Apart in an AI World

As an MSL before the advent of AI, you were the walking embodiment of scientific expertise. Your deep clinical knowledge, data interpretation, and peer-reviewed fluency were the currency of credibility.
But today? AI can analyze faster. Summarize better. Even anticipate questions before they're asked.

So, where does that leave us?
The irony is this: the skills once deemed "soft"— like trust-building, emotional intelligence, and strategic conversation are now the most important to master. When you're looking to differentiate yourself, they are essential.

Why the Shift?
"AI will do the data. You need to do the trust."

AI can already:
• Read and summarize clinical trial data in seconds.
• Generate slide decks.
• Track HCP preferences via engagement algorithms.

But it can't:
• Build a trusted, human-to-human relationship with a skeptical KOL.
• Know the right moment to bring forward an insight.
• Align your scientific discussion to what truly matters to an HCP—and their patient

According to a global study of strategic account managers, the five most critical skills for next-level performance are all soft skills [1]:

1. Communication
2. Collaboration

3. Strategic mindset
4. Trust-building
5. Internal influence

Recent data reinforces the shift: Wiley's 2024 skill gap survey found 80% of professionals believe soft skills are growing in importance, and 84% still prefer face-to-face communication over AI-generated alternatives [2].
Forbes notes that while AI can out-analyze, humans can still out-lead, out-learn, and out-connect [3].
Fast Company calls soft skills like emotional intelligence and adaptability the "new currency of work" [4].
And Wired reminds us that in an AI-fueled workplace, the future will still be human-first [5].

Why These Skills Are So Hard

1. They take time.
   You can't fast-track trust or download empathy.
2. They require unlearning.
   You've been trained to deliver facts. That's what got you through school, top of the class. Now, the new learning is around building trust so you can facilitate insightful conversations.
3. They're invisible until they're missing.
   You can't always measure a trusted HCP relationship. But when it's gone? So is your influence.

Soft skills don't show up on spreadsheets, but they determine the numbers that do.

What MSLs (and Their Leaders) Must Do Now

1. **Start with a mindset, not a method.**
   Belief precedes behavior. If you don't believe your emotional and relational impact matters, you won't develop it. The mindset of helping others, especially helping doctors help patients, will reconnect you to your deeper why. **Purpose comes from serving others.** And once you're grounded in purpose, what you think, say, and do changes. That's the mindset that leads to better outcomes.
2. **Shift how we train.**
   The future isn't more slide decks. It's learning through story, reflection, and authentic dialogue. As an MSL team leader, it means creating space for MSLs to articulate their personal sense of purpose and to use that as a guidepost for more meaningful, patient-centered conversations.
3. **Build emotional muscle like scientific muscle.**
   Just like we run journal clubs, we should run trust labs. Roleplaying with empathy. Rehearsing difficult conversations. Practicing vulnerably sharing your *purpose story.* Celebrating when connection made the difference. People with these muscles are the ones who have influence.

Want a simple framework for trust? Try the Trust Equation:

In your role as an MSL, you often focus on credibility, scientific accuracy, expertise, and of course, reliability (doing what you say you will), but trust is also about intimacy a (genuine, safe connection) and reducing self-orientation (patient-focused mindset). The best MSLs listen to understand and build connection and trust through purpose-led conversations. That's what moves the trust dial.

Conclusion
You still have a powerful role to play in improving patient outcomes—but it won't be just about delivering data. AI will carry some of that load.

The MSL of the future will win by:
• Inspiring belief.
• Cultivating trust.
• Helping HCPs feel something—connecting the science to something that matters—to the patient, the physician, the system.

And here's the secret: that level of connection starts with you.
Purpose comes from service to others. Full stop. When you reconnect with your own purpose—when you remember that your role is to help doctors help patients—what you think, say, and do shifts. And you find your way to help, to make your impact, to make your difference in the world.

Purpose isn't a soft concept. It's a strategic one. It gives you clarity. It builds trust. And it sustains you when the metrics shift and the tech accelerates.

Because in the end, purpose drives performance.
And that's something no machine can replicate.
That's what makes the soft stuff the new hard edge.

Disclaimer: This article was developed with the assistance of generative AI tools.

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When Jill was 35, her father's life was tragically lost due to an avoidable prescribing error. Working in pharma, she was driven to figure out how we could do better. Her research revealed one crucial insight: purpose transforms outcomes.

Through her 3 books, programs, and speaking engagements, she empowers pharma leaders to build trust, foster collaboration, and achieve

From Science Communicators to Medical Strategists: The Evolution and Future of Field Medical Affairs

By Rayana Luna, PhD, MSc | Summer 2025

Over the past decade, the role of the Medical Science Liaison (MSL) has undergone a remarkable transformation. What began as a primarily scientific communication function has expanded into one of strategic influence, project leadership, and even account management in some contexts. In this article, I will explore this shift, the drivers behind it, and what it could mean for the future of field medical affairs.

If we look back in time, 10 years ago, the MSL role was largely defined by its ability to translate complex scientific data into digestible insights for healthcare professionals (HCPs). The value we provided was centered around our deep clinical and scientific knowledge, and our credibility stemmed from our academic training and ability to articulate evidence clearly and accurately.

However, over the past few years, the industry's needs have evolved, and so has the role of the MSL. Today, MSLs are not only scientific experts but also strategic partners. They are expected to understand and interpret real-world evidence, contribute to product launch strategies, and collaborate cross-functionally across commercial, access, and regulatory teams. In some regions, MSLs are even taking on responsibilities that overlap with key account management, especially in therapeutic areas with complex access environments such as Rare disease and Oncology, among others.

Here are several key factors that, in my opinion, have accelerated this shift:

1. Patient Centric Models: The rise of patient centricity has led to the need for deeper stakeholder engagement across the healthcare ecosystem. MSLs are increasingly asked to engage not only with physicians but with pharmacists, payers, and advocacy groups.
2. Data Proliferation: With the explosion of data sources, including clinical trials, real-world evidence, and health economics, there is growing demand for professionals who can interpret and contextualize these findings. MSLs are uniquely positioned to do this.
3. Launch Excellence: As pipelines grow more specialized and launch cycles accelerate, field medical teams are now at the table much earlier. MSLs often contribute to prelaunch insights gathering, competitive intelligence, and mapping of scientific influence networks.
4. Cross-functional Integration: The silos that once separated Medical, Commercial, and Market Access are becoming increasingly porous. MSLs now operate within broader integrated teams, contributing not only scientific guidance but strategic input that informs business decisions.
5. Customer focus: Roles like MSL have in their DNA the fact that they should tailor to customer needs. That means adapting the deliverables to meet their needs in the best way possible for their practice, research or patients. HCPs have been vocal in the past years about their preferences in having a hybrid approach with fewer points of contact from the Pharma companies.

The modern MSL is a hybrid professional equal parts scientific communicator, strategic advisor, and ecosystem navigator. We are now expected to:

- Lead scientific engagement planning based on stakeholder segmentation and tailored objectives
- Gather, analyze, and escalate medical insights that shape local and global strategy
- Collaborate in evidence generation planning, whether through IITs, registries, or RWE initiatives
- Contribute to access and reimbursement discussions by translating complex science into patient value stories

- Guide internal teams in navigating scientific opinion shifts, therapeutic area evolution, and competitive positioning

These responsibilities require new capabilities. Scientific depth is still essential, but MSLs must now also master soft skills such as strategic thinking, stakeholder mapping, influence without authority, and the ability to articulate value beyond efficacy. As the role evolves, so does its identity. In many organizations, the traditional title of “Medical Science Liaison” is being reconsidered. New titles like “Field Leader,” “Therapeutic Area Lead,” “Field Expert,” or even role-specific names like “CAR-T Liaison” are emerging. These shifts reflect a broader acknowledgment of the strategic contributions field medical professionals bring to the organization and their increasing alignment with disease area strategy, not just scientific exchange. If this evolution is to succeed, medical organizations must rethink how they recruit, onboard, and develop field medical talent. A few priorities come to mind:

- Broaden hiring profiles: While a PhD or PharmD remains foundational, candidates with cross-functional or business exposure, such as market access, HEOR, or consulting, are increasingly attractive. Breaking into your first MSL role might be a little harder now.
- Invest in upskilling: MSLs should be equipped with not only disease area knowledge but also training in business acumen, project management, and data interpretation
- Redefine success metrics: Traditional KPIs focused on calls and interactions are insufficient. Organizations must track the quality of insights, strategic contributions, and influence on cross-functional decision-making
- Nurture leadership: Today’s MSLs are tomorrow’s Medical Affairs leaders. A strategic mindset should be fostered early on

The future of Medical Affairs is one of greater impact and deeper integration. As generative AI, precision medicine, and patient-level data further shape the landscape, MSLs will be at the frontlines interpreting, advising, and co-creating solutions with stakeholders. **I believe that we must continue to evolve as Medical Affairs professionals! We must stay curious, stay connected, and most importantly, stay grounded in our mission to bridge science and medicine in ways that benefit patients and systems alike.**

This article is not a prediction; it is a call to action. If you are an MSL today, ask yourself: Am I only communicating science, or am I shaping strategy? The answer will define your role not just for this year but for the next decade.

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Rayana Luna is an experienced medical affairs professional with over a decade of regional, national, and international pharmaceutical experience. She has led high-performing MSL teams across large Global Organizations and is passionate about mentoring the next generation of field medical professionals. Her work priorities are focused on innovation, cross-functional collaboration, and elevating the role of medical affairs while driving strategic impact. In her current Capacity at Your MSL Coach, she offers Consulting services to professionals and companies in the areas of Medical Affairs career transition, Medical

Excellence, and Omnichannel strategy execution.

The Evolving Role of MSLs in Supporting Sales Through Collaborative KOL Engagements

By Priya Mehta, PhD | Summer 2025

Corporate Medical Affairs Department, Zydus Lifesciences

In the current healthcare landscape, where scientific credibility and strategic field execution go hand in hand, the role of Medical Science Liaisons (MSLs) has grown tremendously. These professionals now serve as the vital link between scientific advancement and clinical practice. Although their function is distinctly non-promotional, MSLs work closely with sales teams to enhance healthcare professional (HCP) confidence and drive evidence-based adoption of therapies.

MSLs as Scientific Partners in the Field

MSLs are subject-matter experts with academic credentials such as MPT, PhD, PharmD, or MSc. Their responsibilities include:

- Translating complex clinical data into meaningful insights for HCPs
- Building collaborative relationships with researchers and KOLs
- Supporting clinical research initiatives
- Feeding back medical insights to shape internal strategies
- Delivering scientific training to internal stakeholders, including commercial teams

From personal experience, I recall a meeting early in my career where I was invited to present phase III data on a biosimilar to a senior oncologist. The discussion extended far beyond efficacy data—he was keen to understand local pharmacovigilance findings and immunogenicity data. The trust I was able to build in that single interaction helped convert the meeting into a long-term scientific collaboration and further increase in getting a loyal customer for the sales team as well.

Distinct Roles, Shared Goals: MSLs and Sales Collaboration

While MSLs and sales teams serve different purposes, their goals are often aligned. Collaboration ensures streamlined communication with KOLs and avoids redundancy or confusion in engagements.

Sales professionals focus on operational access, distribution channels, and product positioning. MSLs complement this by offering a clinical perspective, responding to scientific queries, and facilitating ongoing medical dialogue.

During a recent prostate cancer biosimilar rollout, our aligned effort made a notable difference. A uro-oncologist was hesitant about switching to a biosimilar. My role was to present India-specific data, while the sales colleague addressed availability and formulary details. This collaborative yet distinct approach enabled an informed decision and an increase in sales thereafter for the molecule.

Real-Life Value of MSLs in Field Engagements

1. **Establishing Trust through Objectivity**
   MSLs are recognised as independent scientific professionals, distinct from promotional roles. In one interaction with a senior clinician, I was told, “It’s refreshing to have a conversation that’s informative without any sales angle.” That distinction lays the foundation for credibility.During a discussion with an oncologist, I presented real-world data from Indian registries. He later remarked that he found the session “educational, not promotional”—a key marker of trust.A memorable example comes from working with an oncologist who was initially cautious about integrating a biosimilar into his treatment protocol. I approached the discussion by presenting real-world clinical evidence, with a particular focus on Indian patient outcomes. Rather than rushing the interaction, I focused on building trust over multiple scientific exchanges, each tailored to his specific queries around safety, immunogenicity, and therapeutic equivalence.

   Eventually, the clinician felt confident enough to share de-identified patient outcomes from his own practice. I

collaborated closely with him in analysing the data and drafting an abstract that was successfully accepted for presentation at a major international oncology conference. Later, I assisted in preparing a manuscript, ensuring scientific accuracy and compliance, which was subsequently published in a respected peer-reviewed journal.

This collaboration evolved into an ongoing professional relationship. The clinician now frequently reaches out for data updates, support with academic materials, or guidance on new trial evidence. As a result of this scientific engagement, there was a noticeable shift in his prescribing pattern—marked by greater confidence in the therapy—and increased awareness among his peers, contributing indirectly to stronger product uptake in his region.

2. **Clarifying Complex Evidence**
   Explaining topics like study design limitations or biomarker relevance is a regular part of our role. In one interaction, a clinician was puzzled about diverging safety profiles between two biosimilars. My explanation on the role of excipients and immunogenicity shaped his confidence in prescribing our drug molecule.
3. **Sustaining Engagements Post-Visit**
   Scientific engagement doesn't stop at a field visit. Many of my relationships with KOLs began with one visit and grew through invitations to advisory boards, publication reviews, or training events.
4. **Enabling Sales Team Capability**
   I've frequently conducted clinical training for the sales force, ensuring our field teams speak the same scientific language when discussing a product.
5. **Capturing Insights That Matter**
   Field feedback collected during MSL interactions is gold for internal teams. For instance, several 0ncologists highlighted the need for data on Quality of life outcomes—not just clinical endpoints—which influenced our communication strategy for a new breast cancer therapy.

The Ripple Effect on Market Success

Though MSLs don't promote products, their interactions often pave the way for:

- Earlier adoption of breakthrough or biosimilar treatments
- Informed decision-making by clinicians
- Better market understanding during launches
- Continuous improvement in strategic planning and positioning

In one region, I observed a marked increase in the adoption of a biologic after we held structured scientific sessions with key stakeholders. These were not sales pitches but evidence-based discussions led by the Medical team.

Ethics and Compliance: The Non-Negotiables

Maintaining scientific neutrality is essential. To preserve ethical standards:

- MSLs steer clear of commercial conversations like pricing or rebates
- Roles are clearly defined before joint meetings
- All engagements are routed through compliant and approved processes

There was an instance when an HCP directed a pricing question to me. I politely redirected it to the sales colleague, later reinforcing the role boundary. This not only preserved compliance but also reinforced my credibility.

Choosing and Nurturing the Right KOLs

Identifying impactful KOLs is part art, part science. Ideal profiles often include:

- Contributions to clinical trials or publications
- Roles in guideline development
- Influence within local or regional professional networks

In my early tenure, I was introduced by a sales representative to a KOL who had significant influence in a medical society. By offering value-driven discussions and timely updates, I eventually became his go-to for medical literature support. That relationship now anchors several scientific initiatives.

Sustaining the Relationship: A Long-Term Perspective

Strong, enduring KOL relationships are built on:

- Providing new insights with every interaction
- Timely, informed follow-ups
- Constant upskilling by the MSL
- Adherence to ethical standards

One senior clinician once told me, “It’s not just the data you bring—it’s the consistency and clarity that makes the difference.” That statement stayed with me and continues to guide how I approach every interaction.

Conclusion

In a data-intensive healthcare ecosystem, the need for trusted, science-led engagement has never been higher. MSLs, through their partnership with sales and their commitment to objective, evidence-based discussion, are increasingly central to driving the adoption of quality therapies.

Through my journey, I’ve learned that the most impactful MSLs are those who engage with humility, listen more than they speak, and never stop learning. When the MSL-sales partnership is built on mutual respect and scientific integrity, the benefits flow not just to the organisation—but ultimately to the patients we all serve.

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Dr. Priya Mehta is a medical affairs professional at Zydus Lifesciences with over a decade of experience in oncology, diagnostics, and clinical research. She has held roles across academia, research fellowships, and the pharmaceutical industry. With a Ph.D. in breast cancer biology and a postgraduate diploma in healthcare management, Dr. Mehta specialises in medical strategy, scientific communication, and real-world evidence (RWE) generation. At Zydus, she brings scientific rigour and strategic insight to support brand planning, KOL engagement, and evidence-based initiatives for biologics and biosimilars.

She has authored more than 20 publications and was a finalist for the MSL Rookie of the Year 2023 (Outside USA category), awarded by the MSL Society. Dr. Mehta continues to contribute to oncology discourse through freelance scientific writing and invited lectures as well.

Finding and Acting on the Common Denominator as an MSL in Field Work

By Alex Palumbo | Summer 2025

The Medical Science Liaison (MSL) is expected to bond with the HCPs and have long-standing relationships, which can be the root of strategic performance. Thus, the MSL can be regarded as the “CEO” of the attributed territory. As CEOs plan to have an impact on the customers with their products, the MSL should consider the interactions with HCPs as a starting point to set out a plan to strategically affect the territory according to the medical plan.

The underlying strategy is supposed to gather information about the local needs and challenges of HCPs and convey this information within the community of HCPs. Such an undertaking facilitates the detection of needs and challenges that HCPs and, eventually, patients encounter for their treatments. Once the information is gathered, the MSL summarizes all needs and challenges and points them according to the map of the territory. In the next step, the geographical visualization of the needs and challenges will be used to determine which needs and challenges are rather local or regional. This step represents a crucial point of diversification as strategic impact must be planned respectively.

Since each HCP might have different priorities, preferences, scientific affiliations, work schedules and responsibilities, the MSL needs to consider these factors i) when deciding whether the need or challenge represents a local idiosyncratic phenomenon or a general one in the region or ii) whether the need or challenge is not articulated but is systematically present due to the health care system, treatment or access infrastructure, or lack of patient flow and demand.

In case the gathered information about the need and challenge is of an individual and local nature, the MSL might need to discuss with the HCP how the MSL can help to improve the situation. Depending on the demand, the MSL might need to involve colleagues from other departments. Such cross-functional effort ensures the most efficient support for the HCP. This will help the MSL and the company to strengthen the relationship with the HCP, as such an undertaking will eventually benefit the patients.

If, however, the need or challenge has been stated by many HCPs in the territory, the MSL has found a common denominator. The common denominator represents a pivotal opportunity for the MSL and the company to have a long-lasting strategic impact in the region and eventually nationwide (if the common denominator is found in other territories, too). As a board committee expects specific execution from the CEO, in such situations, the company and the HCPs expect the MSL to be responsible, notice, and act on the common denominator in the territory, as patients’ lives can eventually be improved or even rescued from the strategic undertakings.

The MSL can set up a territorial strategy by bringing HCPs together. This will initiate discussions about the common denominator and will eventually lead to ideas, plans, and solutions on how to address it. Afterwards, frequent visits and close communication with all HCPs are required as a follow-up to such events to ensure the execution.

Subsequently, the MSL needs to align the common denominator with the current medical plan to ensure the company’s goals are achieved in the region by involving the HCPs in the territorial strategy. Depending on the context of the common denominator, this step might be either easy or difficult to achieve, as medical plans tend to cover needs or challenges HCPs encounter nationwide, but not region-specific. Nevertheless, the MSL should also inform the company about the development on a regular basis, as the company’s strategy might have an impact on the region or the company decides to act on the common denominator on a nationwide scale.

Although the needs and challenges have been distinguished between local and regional, it is important to note that the geographical information must be regarded as mutual rather than exclusive. A local need or challenge does not necessarily affect the HCPs and patients of other locations. However, the local need or challenge might play a role in an overarching need or challenge that might not have been articulated yet. Therefore, it is crucial that the MSL takes note of all needs and challenges HCPs and their patients encounter, as there may be hints to even stronger forces in the territory.

The MSL possesses a lot of opportunities to have an impact on HCPs and their patients. It is important that the MSL seeks such opportunities and acts on them in a timely manner, as HCPs and their patients might encounter other needs and challenges following from the ones that have not been addressed in the past. The responsibility and accountability of the MSL are similar to those of a CEO.

Disclosure:

This text represents my own views and not those of my former or current employer(s).

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Future-Proofing the MSL Role: Core Skills to Master by 2030

By nolie.gutierrez@themsls.org | Summer 2025

Introduction
A growing body of research, including McKinsey & Company's landmark report A Vision for Medical Affairs 2030, underscores that medical affairs will be a central driver of patient impact, innovation, and strategic influence by the next decade. According to McKinsey, medical affairs must enhance enterprise-wide leadership, integrate end-to-end data, personalize engagement, align evidence generation with stakeholder needs, and differentiate strategy through scientific value. This vision emphasizes the necessity for MSLs to move beyond their traditional roles and evolve into leaders who promote cross-functional collaboration and use data-driven insights to support personalized, value-based healthcare.

To remain impactful and competitive, MSLs must sharpen a multidimensional skill set. This includes:

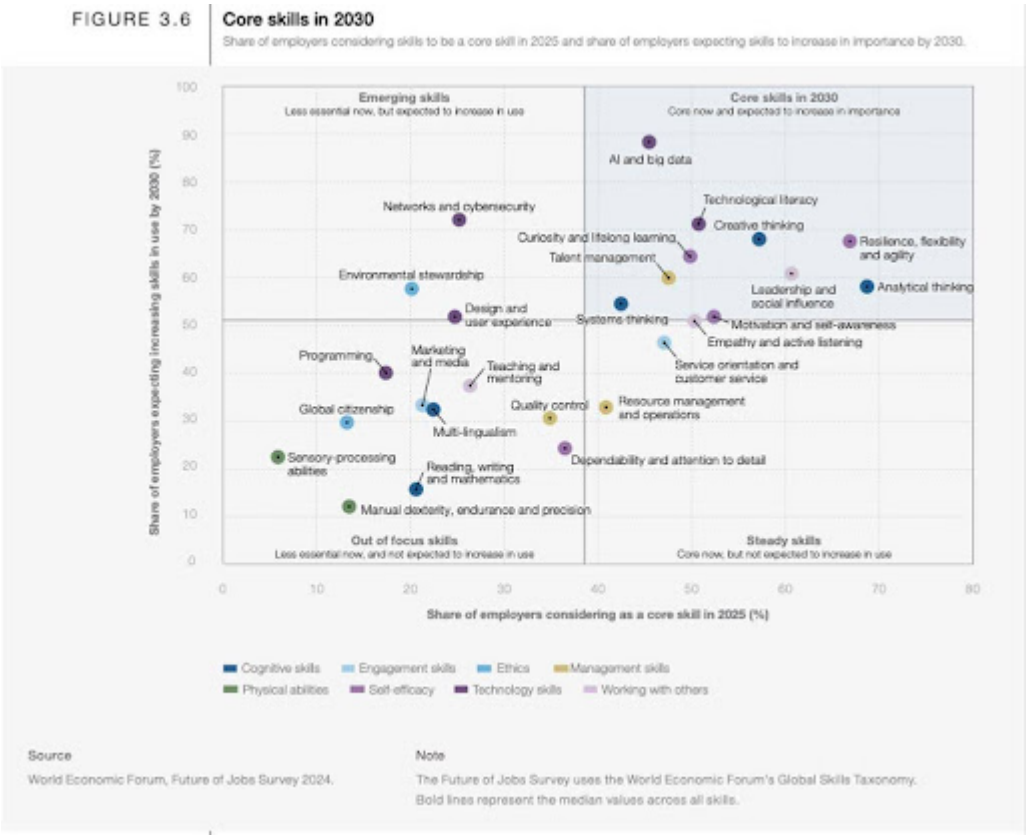
- **Cognitive skills** such as analytical and creative thinking for data interpretation and scientific storytelling;
- **Technology skills**, such as AI literacy and health IT navigation, are necessary to keep pace with digital transformation.
- **Engagement skills**, including empathy, active listening, and social influence to deepen HCP relationships;
- **Self-efficacy** traits such as resilience, curiosity, and motivation to lead with adaptability;
- **Strategic business skills** covering service orientation, market awareness, and commercial alignment;
- **Mentorship and teaching** abilities to elevate team performance and knowledge sharing;
- **Professional growth planning** to build a lasting, portfolio-style career trajectory.

As healthcare continues to rapidly transform, driven by AI, precision medicine, and digital therapeutics, the role of the MSL is shifting significantly. No longer merely a conduit between pharmaceutical companies and healthcare professionals, the MSL of the future must combine scientific expertise with digital fluency and strategic insight.

According to the World Economic Forum's Future of Jobs Report 2024, the skill expectations for professionals are shifting dramatically. Figure 3.6 of the report highlights the skills projected to be core by 2025 and those expected to grow in importance through 2030. For MSLs, adapting to this shift is not just about remaining relevant**—it's about becoming indispensable leaders in innovation, strategy, and cross-functional engagement**.

Core Skills in 2025

Core Skills in 2030



This report outlines the 14 core skills that MSLs must cultivate to thrive in this evolving landscape, organized into categories such as cognitive ability, digital proficiency, engagement capability, and strategic foresight. Each skill is detailed with practical examples, suggested learning pathways, and a comprehensive framework to help future-proof the profession.

Table of Core MSL Skills and Strategic Focus Areas

	Skill	Category	Strategic Focus	Example Impact
1	AI and Big Data	Technology Skills	AI interpretation, diagnostics, and trial optimization	Translating ML-generated biomarker data for clinical application
2	Technological Literacy	Technology Skills	Digital tools, platforms, and clinical decision support	Supporting EHR-based workflows and AI diagnostic systems
3	Analytical Thinking	Cognitive Skills	Synthesizing RWE, EHR data, and clinical insights	Creating insight reports that shape access and publication strategies
4	Creative Thinking	Cognitive Skills	Storytelling, educational tool innovation	Designing infographics and interactive advisory board content
5	Leadership and Social Influence	Engagement Skills	Guiding without authority, internal and external collaboration	Influencing brand strategy through field insights
6	Resilience, Flexibility, and Agility	Self-Efficacy	Navigating ambiguity, handling regulatory or access challenges	Pivoting strategy mid-launch to align with payer feedback
7	Empathy and Active Listening	Engagement Skills	Trust building, deep listening, patient-centered discussions	Adjusting engagement to address emotional challenges in therapeutic area like oncology
8	Curiosity and Lifelong Learning	Self-Efficacy	Staying current with science, policy, and platforms	Launching team journal clubs and attending data science masterclasses
9	Systems Thinking	Cognitive Skills	Connecting market, clinical, and regulatory factors	Advising teams on evidence gaps that affect payer decision-making
10	Motivation and Self-Awareness	Self-Efficacy	Value-driven leadership, behavior reflection	Using 360 feedback to improve communication with cross-functional teams

11	Service Orientation and Customer Centricity	Strategic & Commercial Competency	Meeting stakeholder needs, co-creating scientific and practical value	Designing tailored education for resource-limited health centers
12	Talent Management and Mentoring	Teaching and Mentoring	Developing team capabilities, coaching	Running MSL onboarding and mentorship programs
13	Business Acumen and Strategic Alignment	Operational Strategy	Aligning insights with brand goals and lifecycle decisions	Shaping competitive planning based on regional insight integration
14	Portfolio Career Development and Personal Branding	Professional Growth	Planning for future roles, building visibility and impact	Speaking at conferences and curating professional thought leadership portfolios

14 Core Skills for MSLs by 2030: A Comprehensive Guide

To succeed in the evolving life sciences landscape, MSLs must go beyond foundational expertise and cultivate a forward-looking, multidimensional skill set. Drawing from the *World Economic Forum's Future of Jobs Report 2024* and tailored to the demands of modern medical affairs, this section outlines **14 essential skills** that every MSL must develop to thrive by 2030.

Each skill below is presented with:

- A **detailed explanation** of its relevance to the MSL role
- **Real-world examples** of application in medical affairs
- **Targeted upskill strategies** to guide professional growth and mastery

Together, these capabilities form the blueprint for a **future-ready MSL**. This professional is not only scientifically credible but also digitally literate, business-savvy, emotionally intelligent, and strategically aligned with organizational goals.

1. AI and Big Data: Embracing the Machine Learning Frontier

Skill Category: Technology Skills AI is no longer futuristic—it's foundational. From identifying biomarker signatures in real-world data to optimizing clinical trial design and patient recruitment, the utility of AI in medical affairs is growing rapidly. MSLs must be able to translate algorithmic outcomes for KOLs and internal teams.

Application Example: Explaining the use of AI-derived synthetic control arms in oncology trials or interpreting AI-supported risk stratification models used in clinical practice.

Upskill Strategy: Engage in AI literacy programs such as MIT's *AI for Healthcare*, and complete modules on data bias and responsible AI to ensure ethical use of these technologies.

2. Technological Literacy: Navigating Digital Health and Virtual Engagement

Skill Category: Technology Skills In a post-pandemic world where digital health tools have become the norm, MSLs must master platforms beyond basic virtual communication. Technological literacy now encompasses familiarity with digital therapeutics, wearable biosensors, AI-based clinical decision tools, and electronic health record (EHR) integrations. Understanding how these technologies impact clinical practice enables MSLs to engage in more relevant, practice-centered conversations with providers.

Application Example: Supporting a health system's adoption of an AI-powered clinical decision platform by guiding them through how real-time genomic and imaging data can be integrated into the diagnostic workflow.

Upskill Strategy: Enroll in courses in health informatics, digital health, or bioinformatics. Seek hands-on experience with tools and stay current on FDA guidance for digital health products.

3. Analytical Thinking: Transforming Insights into Action

Skill Category: Cognitive Skills
Analytical thinking is essential for MSLs to interpret clinical trial results, real-world evidence (RWE), and health economic data. More than reporting findings, MSLs must synthesize multiple data types—including EHRs, claims data, and feedback from engagements—into actionable insights that inform strategies across clinical development, market access, and commercial

teams.

Application Example: An MSL combines insights from regional prescribing trends and payer feedback to propose a health economics study that supports broader reimbursement for a precision therapy.

Upskill Strategy: Pursue training in RWE and data analytics (e.g., Harvard's Data Science Certificate). Attend sessions at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) and the Academy of Managed Care Pharmacy (AMCP), and practice using tools like Tableau or Excel for medical analytics.

4. Creative Thinking: Innovating Scientific Communication

Skill Category: Cognitive Skills
Creative thinking empowers MSLs to make science memorable and meaningful. It's not just about accurate data—it's about crafting a message that resonates. Whether co-developing patient-friendly infographics or structuring a compelling advisory board, creativity adds value to every interaction.

Application Example: An MSL designs a customized, narrative-driven presentation for a rare disease awareness event that leads to expanded clinical trial enrollment.

Upskill Strategy: Enroll in storytelling and design thinking courses. Use tools like Canva and BioRender to communicate complex ideas visually. Practice simplifying data while retaining scientific integrity.

5. Leadership and Social Influence: Leading Without Authority

Skill Category: Engagement Skills
MSLs frequently lead without formal authority. Their influence comes from scientific credibility, communication skills, and trust. MSLs must guide internal strategies, motivate external collaborations, and shape decisions using insight and integrity.

Application Example: An MSL leads the development of a cross-functional competitive response plan based on insights from national conferences and KOL feedback.

Upskill Strategy: Participate in influence and stakeholder engagement workshops. Study leadership frameworks, such as the Situational Leadership Model. Practice presenting insights during internal strategy meetings to enhance your effectiveness.

6. Resilience, Flexibility, and Agility: Navigating Ambiguity

Skill Category: Self-Efficacy
The healthcare environment is dynamic—regulations shift, launch timelines change, and internal priorities pivot. MSLs need emotional resilience and cognitive flexibility to remain effective. This means staying calm under pressure, quickly reprioritizing, and finding solutions in the face of ambiguity.

Application Example: Following an unexpected delay in product launch, an MSL redesigns their KOL engagement strategy to focus on disease education and upcoming pipeline innovation.

Upskill Strategy: Practice scenario planning and crisis communication. Engage in mindfulness or resilience training programs. Attend adaptive leadership workshops or executive coaching programs focused on agility.

7. Empathy and Active Listening: Building Trusted Relationships

Skill Category: Engagement Skills
Trust is the cornerstone of the MSL–KOL relationship. Empathy and active listening help MSLs uncover unmet needs, tailor engagements, and maintain credibility. Understanding the "why" behind a clinician's concerns is often more impactful than delivering a perfect data point.

Application Example: During a scientific exchange, an MSL detects hesitation from a KOL and adjusts the discussion to address real-world patient access barriers, earning greater long-term trust.

Upskill Strategy: Train in motivational interviewing and emotional intelligence. Utilize active listening frameworks, such as OARS (Open-ended, Affirmation, Reflection, Summarization), to structure conversations effectively. Reflect after each engagement.

8. Curiosity and Lifelong Learning: Staying Scientifically Relevant

Skill Category: Self-Efficacy
Medical science evolves rapidly. A growth mindset is essential for MSLs to stay ahead. Curiosity fuels innovation, continuous improvement, and deeper scientific acumen, enabling MSLs to educate others and remain trusted sources of cutting-edge knowledge.

Application Example: An MSL launches a journal club within the medical affairs team to continuously evaluate new immunotherapy research and foster peer learning.

Upskill Strategy: Subscribe to top journals, attend regular congresses, and pursue microcredentials in new areas (e.g., genomics, AI in healthcare). Participate in peer networks, such as the MSL Society or Medical Affairs Professional Society (MAPS), to exchange expertise.

9. Systems Thinking: Connecting Clinical, Regulatory, and Market Dots

Skill Category: Cognitive Skills
Healthcare does not operate in silos. Systems thinking helps MSLs understand how medical, payer, policy, and operational decisions are interlinked. This perspective allows MSLs to tailor strategies to the realities of local and global healthcare systems.

Application Example: An MSL helps a cross-functional team understand how regional payer restrictions are impacting prescribing behavior and supports the development of real-world evidence to address it.

Upskill Strategy: Study healthcare systems via public health electives or executive education. Learn frameworks used in value-based care, reimbursement policy, and service line planning.

10. Motivation and Self-Awareness: The Inner Game of Leadership

Skill Category: Self-Efficacy
MSLs often work independently, which requires strong internal motivation. Self-awareness helps identify personal triggers, values, and communication patterns. It enables MSLs to align with purpose, manage stress, and grow as ethical leaders.

Application Example: An MSL receives 360° feedback that their communication style can be overly technical; they reflect, adjust, and improve engagement outcomes with commercial and clinical stakeholders.

Upskill Strategy: Use tools like StrengthsFinder or DiSC. Work with a mentor or coach. Reflect on your values and long-term goals through journaling or personal development exercises to stay aligned with your goals.

11. Service Orientation and Customer Centricity: Delivering Value Across the Ecosystem

Skill Category: Strategic & Commercial Competency
MSLs must think beyond delivering data—they must co-create value tailored to the unique needs of healthcare providers, institutions, and patients. Service orientation means understanding clinical workflows, patient barriers, and institutional pressures. It also means making each helpful interaction efficient and relevant.

Application Example: After learning that a KOL’s clinic is overwhelmed by administrative burden, the MSL creates a streamlined one-pager comparing biomarker testing protocols to save the team time.

Upskill Strategy: Attend workshops on customer journey mapping and patient-centered engagement. Learn from commercial colleagues about value-based selling techniques while maintaining compliance with medical-scientific boundaries.

12. Talent Management and Mentoring: Elevating the Field

Skill Category: Teaching and Mentoring
As MSLs advance in seniority, they are expected to serve as role models and talent developers. Mentorship improves team performance, morale, and succession planning. It also reinforces the mentor’s own knowledge and leadership capacity.

Application Example: A senior MSL develops a structured onboarding program for new hires and holds regular peer coaching sessions to help newer colleagues refine their scientific exchange techniques.

Upskill Strategy: Participate in mentorship or coaching certification programs. Use structured feedback tools, such as the

GROW Model (Goal, Reality, Options, Will). Read leadership books focused on talent development and servant leadership.

13. Business Acumen and Strategic Alignment: Driving Organizational Impact

Skill Category: Commercial & Operational Strategy
Business acumen enables MSLs to understand how their activities align with broader brand goals, access strategy, and lifecycle management. It empowers MSLs to translate field insights into strategic imperatives and inform cross-functional planning and decision-making.

Application Example: An MSL identifies a gap in real-world data among Hispanic populations and collaborates with the insights and clinical teams to initiate an investigator-sponsored study, supporting diversity and future access.

Upskill Strategy: Take electives in Executive MBA or MBA programs focused on pharma strategy, health economics, or operations. Request to shadow brand planning meetings. Read annual reports and investor presentations to understand business priorities better.

14. Portfolio Career Development and Personal Branding: Planning for What's Next

Skill Category: Professional Growth
The MSL role is a powerful stepping stone—but it should not be the ceiling. Future-ready MSLs think like entrepreneurs: building personal brands, pursuing external thought leadership opportunities, and preparing for roles in clinical development, strategy, digital innovation, or even consulting.

Application Example: An MSL builds a LinkedIn following by regularly posting summaries of conference data, which leads to invitations to speak on webinars and serve as a panelist at scientific forums.

Upskill Strategy: Write articles or LinkedIn posts. Volunteer for speaking opportunities at congresses or within your company. Develop a personal board of advisors who challenge and inspire your growth. Track accomplishments in a leadership portfolio.

Conclusion

The MSL of 2030 will be far more than a field-based scientific expert. They will be strategic communicators, cross-functional collaborators, and digitally fluent leaders who can navigate complex health ecosystems. Those who invest now in targeted upskilling will not only remain relevant—they will shape the future of medical affairs.

The role of the MSL is undergoing a profound evolution, shifting from a scientific support function to a strategic pillar within the organization. By mastering these 14 future-focused skills, MSLs will transcend traditional boundaries to become trusted advisors, system-level thinkers, and drivers of innovation across medical, commercial, and regulatory domains.

Those who embrace this transformation—investing in continuous development, digital fluency, and strategic alignment—won't just keep pace with change. They will lead it. **The MSL of 2030 will be a catalyst for scientific advancement**, a translator of emerging technologies, and a critical voice in shaping patient-centric, data-driven healthcare solutions. In redefining their role today, MSLs are actively building the future of medical affairs.

By aligning their development with evolving healthcare needs, MSLs can transition into leadership roles such as Vice President of Medical Affairs, Chief Medical Innovation Officer, or Global Strategy Director. In a world driven by data, precision, and personalization, it is the MSL who will bring humanity, insight, and strategy together at the forefront of healthcare.

The MSL role is not the end-all, be-all. Future-ready MSLs will actively design a professional identity that evolves in response to market needs—whether through personal branding, cross-industry collaborations, or new ventures. The ability to adapt, reposition, and lead across diverse landscapes will define the next generation of medical leaders.

The MSL of 2030 will not only master science—**they will shape the future of medicine.** Strategic, adaptable, tech-savvy, and people-centered, MSLs will bridge innovation and access, helping health systems and patients achieve more. With the right mix of business insight, emotional intelligence, and thought leadership, the future-ready MSL will drive success for their organizations and their careers alike.

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Dr. Maria Abunto's career blends medical expertise with a strong commitment to public health. She began her journey by earning a Doctor of Medicine (MD) from the University of the East, followed by a master's degree in Public Health (MPH) with magna cum laude honors from the University of Pittsburgh School of Global Health. She completed an Executive MBA at the Katz Graduate School of Business, achieving high academic excellence and induction into the Beta Gamma Sigma International Business Honors Society, which distinguishes her as one of the top 20% of her class.

Her professional journey includes various roles that have deepened her understanding of the intersection of healthcare, technology, and innovation. As an Epidemiologist at the National Institutes of Health, Dr. Abunto worked with the National Cancer Institute on groundbreaking cancer research, which sparked her passion for connecting research to real-world applications. In her role as a senior medical affairs manager, Dr. Abunto led a dynamic team, utilizing her experience in the diagnostic and medical device industries. Her leadership was recognized in 2021 when she received the Medical Affairs Award of Excellence from Exact Sciences, along with the prestigious Medical Science Liaison of the Year honor from the MSL Society, which underscored her commitment and significant contributions to the field.

In 2024, Dr. Maria Abunto received the Margaret F. Gloninger Service Award from the University of Pittsburgh, recognizing her decade-long commitment to community health, organizing blood pressure screenings, and leading COVID-19 vaccine clinics in underserved neighborhoods. In 2025, she was appointed the Pittsburgh Branch Leader for the Healthcare Businesswomen's Association (HBA). She also became the first Ambassador for the American College of Artificial Intelligence in Medicine (ACAIM), where she promotes responsible AI, equity in innovation, and interdisciplinary education. In all her roles, Dr. Abunto is driven by a mission to advance science and improve patient outcomes. Outside her professional commitments, she enjoys fostering wellness through gardening, culinary exploration, cycling, Pilates, and international travel.

Success Factors in Clinical Studies: Contribution of MSLs to Healthcare Professionals and Link With the Industrial

Sponsor

By Farid Benabdallah, MD, PhD | Summer 2025

Introduction

In a context where regulatory requirements, methodological complexity, and competition for patient recruitment are constantly increasing, the success of clinical studies increasingly relies on close and strategic collaboration between the industrial sponsor and healthcare professionals involved in research. At the heart of this interface, Medical Science Liaisons (MSLs) play a pivotal role. As scientific representatives of the pharmaceutical company in the field, they ensure high-level, non-promotional medical communication with key opinion leaders, potential investigators, and clinical site teams.

Their proximity to healthcare stakeholders, deep understanding of medical and operational aspects of clinical trials, and direct connection with the sponsor's clinical development teams enable MSLs to proactively identify motivated investigators and high-potential sites. This targeted matchmaking capacity is essential to optimize site selection, accelerate study start-up phases, and ultimately secure the proper conduct of the trials.

In this article, we explore the key success factors in clinical studies by highlighting the added value of MSLs in aligning medical, scientific, and industrial objectives. We analyze how their strategic positioning strengthens the effectiveness of partnerships between industrial sponsors and healthcare professionals, with the shared goal of advancing clinical research for the benefit of patients.

Context

The development of clinical trials within the pharmaceutical industry now takes place in a complex, competitive, and highly regulated environment. Faced with these challenges, industrial sponsors are driven to optimize every step of the process—from identifying investigators to ensuring the smooth execution of trials. It is within this context that the role of Medical Science Liaisons (MSLs) is gaining strategic importance.

Originally designed as field-based scientific experts, MSLs serve as a bridge between healthcare professionals and the pharmaceutical company's medical teams. Their non-promotional role grants them essential credibility in scientific communication, the collection of medical insights, and the identification of high-potential enrollment sites. In close collaboration with clinical development teams, they align real medical needs with the sponsor's research goals.

At the same time, the medical function within pharmaceutical companies—especially MSLs—has gradually evolved away from the marketing departments to strengthen its role as an independent actor in evidence generation and medical education. It has become an essential interface to support scientific collaborations, including investigator-initiated research (IIR), and to respond to new demands for personalized medicine and real-world data valorization.

Methodology

To rigorously explore the contribution of Medical Science Liaisons (MSLs) in clinical studies, a targeted narrative literature review was conducted. The objective of this documentary analysis was to identify the most relevant publications from the past twenty years specifically addressing the role of MSLs in the success of clinical trials, taking into account industrial, medical, and regulatory issues.

The search was conducted between February and April 2025 using the following bibliographic databases: PubMed, Scopus, Google Scholar, and ResearchGate. Keywords included: *Medical Science Liaison*, *clinical trials*, *medical affairs*, *industry-sponsored research*, *investigator engagement*, *regulatory environment*, and *pharmaceutical development*. Keyword combinations were adjusted to include both common English terms found in scientific literature and those specific to medical functions within the pharmaceutical industry.

Inclusion criteria:

- Publications from 2004 to 2024;
- Studies on the role of MSLs in setting up, managing, or ensuring the success of clinical trials;
- Explicit inclusion of industrial, regulatory, or strategic aspects of clinical development.

The selected sources were assessed for their relevance, scientific quality, and direct connection with the issues analyzed in this

article. Particular attention was given to peer-reviewed publications, position papers from professional bodies, and expert syntheses.

The analysis identified the main areas of MSL impact in clinical studies, structured through a cross-reading of sponsor needs, healthcare professionals' expectations, and regulatory constraints.

Results and Discussion

The analysis of the seven peer-reviewed scientific publications revealed a clear consensus on the added value of MSLs in the success of clinical studies. Positioned between industrial sponsors, clinical research organizations, medical experts, and investigative sites, MSLs contribute significantly to the efficiency and quality of clinical research.

1. **Facilitating healthcare professional engagement**
   MSLs ensure non-promotional scientific communication with clinicians, enhancing the work of project teams (clinical research associates, project managers) by improving protocol comprehension and investigator motivation. According to Chin (2004) and Theron et al. (2021), this peer-to-peer relationship builds trust and encourages physician participation in trials often perceived as complex or unattractive.
2. **Site selection and support**
   Thanks to their field expertise, MSLs help project teams identify high-potential sites that are well-suited to the study protocol, while assessing local feasibility. Their role is crucial in avoiding recruitment failures—a frequently reported issue (Rahman et al., 2011; Daykin, 2018). They support sites throughout the study, facilitating communication with the project teams.
3. **Improving patient recruitment**
   One of the most documented limiting factors in the literature is the insufficient recruitment of patients, often due to low clinician motivation and organizational barriers. By engaging with investigators and project teams, MSLs help overcome these challenges through training, therapeutic education, and strategic alignment with local priorities.
4. **Alignment with industrial and regulatory priorities**
   MSLs operate within a framework of regulatory compliance and ethical standards, ensuring a strict separation between scientific information and commercial goals, as emphasized by Theron et al. (2021). Their work is governed by international standards (APPA, IFAPP, MAPS), which aim to ensure the integrity of interactions with stakeholders.Additionally, they serve as strategic relays for the sponsor: their field insights help adapt operational strategies, identify new research opportunities (e.g., post-marketing studies, IIR), and anticipate the needs of health authorities—reflecting the growing role of medical affairs in pharmacovigilance, real-world evidence (RWE), and health technology assessment (HTA) interactions.
5. **Ongoing challenges despite MSL support**Despite their facilitating role, publications highlight the persistence of major barriers to HCP participation: clinical workload, lack of awareness of research benefits, limited institutional recognition, time constraints, and regulatory complexity (e.g., GDPR, ICH-GCP standards). The effectiveness of MSLs remains conditioned by the presence of a supportive research environment.In summary, the publications converge in recognizing MSLs as pivotal actors in the clinical trial value chain. Their proximity to healthcare professionals and project teams, combined with their integration into the sponsor's medical strategy, enables improvements in study quality, recruitment performance, and regulatory compliance—while also enhancing the scientific reputation of the pharmaceutical company.

Conclusion

In an ever-changing clinical landscape, marked by increasingly complex protocols, heightened regulatory demands, and greater pressure on timelines and data quality, the role of the Medical Science Liaison (MSL) emerges as a strategic cornerstone of clinical study success.

At the intersection of medical field operations, internal project teams, and industrial imperatives, the MSL performs a highly specialized scientific liaison function—facilitating communication between industrial sponsors, investigators, key opinion leaders, and regulatory bodies. Their non-promotional stance, scientific credibility, and operational awareness make them key players in coordinating trials, anticipating risks, and ensuring strategic alignment.

Working in synergy with clinical development, operations, pharmacovigilance, and compliance departments, MSLs help optimize site selection, accelerate patient recruitment, and strengthen healthcare professional engagement—all while upholding compliant, transparent, and scientifically rigorous communication.

Faced with structural and cultural challenges in clinical research, the MSL has evolved beyond a support function to become a

high-value field actor—ensuring scientific relevance, operational fluidity, and adherence to ethical and regulatory standards. Their ability to bridge the sponsor's ambitions with real-world healthcare practices makes them an indispensable pillar for effective, patient-centered, innovation-driven clinical research.

Disclaimer: *The bibliographic research and its synthesis were generated by AI supported by a plan and a critical analysis by the author.*

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Listening Between the Lines: Bridging Insight Gaps Post-Regulatory Approval Through Social Media Listening

By Arta Subagiarta, MD, MMSc | Summer 2025

Regulatory approval, be it from the FDA, EMA, or other agencies, is a critical milestone *but not the finish line.* For Medical Affairs, it marks the beginning of a new challenge: rapidly understanding how treatment is being perceived, questioned, and integrated into practice to benefit patients and communities. While internal teams prepare launch materials and field strategies, critical conversations begin to unfold almost immediately in public digital spaces.

Healthcare professionals (HCPs) share early clinical impressions, patients discuss expectations, and digital opinion leaders (DOLs) shape emerging scientific narratives. These interactions are candid, unfiltered, and occur in real-time, often preceding traditional insight-gathering mechanisms such as field engagement or advisory boards.

Time Since Regulatory Approval	Traditional Insight Flow		Digital Insight Flow
	MSL Field Insights	***Advisory Boards***	***Social Media Listening***
Week 1	Not yet deployed	Not scheduled	Active
Week 2–4	Initial feedback	Not scheduled	Trending Themes
Month 2+	Active	Insights captured	Sustained signals

Figure 1: *Insight Timing Continuum: Traditional vs. Digital Insight Flow Post-Approval*

Social media listening offers a complementary and immediate outlook, providing Medical Affairs with an 'always-on' lens to capture early signals, unmet needs, and perceptions that inform timely strategic decisions.

From Data to Direction

At the core of every medical strategy lies a simple imperative: stay aligned with the evolving needs of patients, HCPs, and the broader healthcare landscape. Upon launch, real-time social media insights help us to quickly gauge sentiment. These early insights reveal what excites HCPs, what questions they have, and how they view the newly approved therapy's impact on patient care. If enthusiasm is low, HCP online commentary can help identify if this is due to factors such as safety concerns, access issues, or data misconceptions.

A hypothetical HCP post might read: "I'm still unclear how the safety data applies to patients with multiple comorbidities. Any post-approval updates yet?"

This type of real-time uncertainty can be flagged early, prompting alignment around key safety messages or the need for targeted field training.

When thoughtfully integrated, social media insights supplement existing feedback channels, offering accelerated feedback loops and early visibility into evolving HCP and patient perspectives. Such early insights are invaluable for shaping launch-directed initiatives across cross-functional teams.

These insights enable field medical teams to tailor their interactions to reflect emerging real-world topics, ensuring Medical Science Liaisons (MSLs) are well-prepared to address questions or clarify any data misunderstandings. By following up during their engagements, MSLs can delve deeper into the reasons behind online HCP viewpoints. Monitoring HCPs online allows MSLs to better understand their stakeholders and engage with them in a more personalized manner. Recognizing HCP motivations for engaging online, whether to educate or expand their network, can guide effective Medical Affairs collaboration. Additionally, social listening helps identify new influential stakeholders and rising stars for future engagement.

The value of social media listening extends beyond the launch phase. It should be viewed as an ongoing, proactive activity

throughout the product's lifecycle. By monitoring the evolving social narrative within a disease state, teams can stay informed about changes in the therapeutic landscape and implications on clinical practice.

Social listening is not only about collecting insights; it's about translating this data into actionable strategies. To harness the full potential of social listening, we need to transition from passive monitoring to active integration. Digital insights should be curated with scientific rigor and contextual understanding and embedded into key activities across the medical ecosystem.

Potential integration points include:

- **Field engagement:** prioritize topics and address objections based on trending conversations
- **Medical content:** adapt core materials, FAQs, and training to reflect real-world discussions
- **Training:** equip teams with examples and language grounded in current dialogues
- **Scientific communication:** identify evidence gaps to guide real-world evidence (RWE) or health economics and outcomes research (HEOR) initiatives
- **External expert identification:** recognize emerging digital voices and community influencers shaping clinical perceptions.

As companies adapt their strategies based on insights, social media can be used to measure the impact of these updated tactics on meeting objectives, allowing for continuous refinement of approaches.

From Volume to Value

Keeping up with the continuous influx of social media data can be challenging. Relying on manual social media monitoring through self-tracking key terms, hashtags, and accounts can be cumbersome and inefficient due to overwhelming data volume and potential noise. This is where social media listening platforms that utilize natural language processing come into play. These powerful tools provide a more precise and targeted approach, allowing users to sift through data from multiple social media sources simultaneously. Users can filter and sort information by time frames, relevant topics, or audience segments, making it easier to organize insights according to predefined listening priorities and strategic questions.

Utilizing automatic notifications or reporting tools available through social listening platforms can alert teams to significant changes in activity within monitored topics or disease areas. These approaches ensure that critical insights are never missed and allow for agile responses to emerging real-world signals.

Challenges, Cautions, and the Road Ahead

While engaging in social media listening, teams should adhere to their company's corporate social media policies, local regulations, and data privacy guidelines. Teams should coordinate with their communications department for managing misinformation or negative narratives. Additionally, it is crucial to follow pharmacovigilance reporting requirements for any mentions of adverse events, misuse, abuse, or off-label usage.

While powerful, social media listening comes with its challenges. Posts may lack context, certain perspectives may be overrepresented, and interpretation requires a careful balance between data and discernment. Key considerations include:

- **Representativeness and bias:** Not all HCPs or patients are active online
- **Interpretation:** Necessitates domain expertise and human review to validate and avoid misinterpretation
- **Privacy and ethics:** Navigating these spaces responsibly within company guidelines is paramount

Despite these challenges, the cost of disregarding digital conversations is substantial. Forward-looking Medical Affairs teams should consider initiating small-scale pilots, forming cross-functional task forces, and establishing structured governance to evaluate feasibility.

Conclusion

In an era where initial clinical impressions of new therapies may surface on social media before appearing in peer-reviewed journals, the opportunity for Medical Affairs to listen and act has never been greater. Social media listening is not about replacing traditional insight collection but enhancing and accelerating it. By capturing what matters in the moment, Medical Affairs can ensure strategies remain timely, patient-centered, and scientifically aligned.

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Mapping the Career Pathways of MSLs in Brazil: From Science to Strategy

By Helio Miranda Costa Junior, PhD | Summer 2025

In Brazil's evolving pharmaceutical landscape, the role of the Medical Science Liaison (MSL) has grown from a medical information channel into a key scientific partner embedded within strategic decision-making. As treatments become more scientifically complex and regulatory environments more challenging, MSLs increasingly serve as interpreters of science and stakeholders in shaping value narratives, not just messengers of data.

Despite this shift, many MSLs encounter a familiar challenge: navigating their next professional step. Career development in Medical Affairs often lacks clear paths, especially in markets like Brazil, where formal frameworks are still maturing. This article examines real-world career trajectories of MSLs in Brazil, identifies common transitions, and outlines practical directions to help individuals and organizations design more intentional development strategies.

Methodology

We conducted a retrospective review of LinkedIn profiles to analyze career movements among professionals whose first documented pharmaceutical role was as an MSL between 2018 and 2022. A total of 313 first-degree contacts with "MSL" listed in their work history were examined. For each profile, we recorded the entry year into the MSL role, the length of duration in the role, and the first position assumed after leaving the MSL function (if applicable).

While LinkedIn data provides a practical window into career movement, it is limited by self-reporting and visibility bias. The analysis does not capture internal organizational nuances, informal roles, or motivations driving each move. It offers a useful snapshot of observable patterns in a competitive Brazilian pharmaceutical sector.

Results

Among the 313 profiles reviewed, 65% remained in MSL roles as of 2022, 27% transitioned to new positions, and 8% had profiles listing MSL as a future aspiration of the MSL title without documented experience. Most professionals began their MSL careers between 2013 and 2016, and stayed in the role for two to four years, a potential period often used to consolidate scientific expertise, build rapport with key opinion leaders, and acquire organizational fluency across functions (Figure 1).

Three main career patterns emerged from our analysis:

1. Vertical progression within Medical Affairs, particularly into Medical Manager roles, was the most frequent path. This trajectory favored professionals with strong clinical backgrounds and a focus on evidence generation or medical governance.
2. Lateral movement was also common, with many MSLs transitioning into areas like Market Access, Regulatory Affairs, Compliance, or Medical Education. These shifts indicate that the core competencies of the MSL, scientific credibility, strategic communication, and systems thinking are valued across different domains.
3. Cross-functional moves into commercial roles were less frequent but notable. Some MSLs pivoted to Marketing, Product Management, or Business Development, suggesting that organizations are beginning to recognize the broader strategic potential of scientifically trained professionals.

These patterns reinforce the idea that while the MSL role is grounded in science, it builds a versatile foundation for broader career growth (Figure 2).

Discussion

The data suggests that the MSL role in Brazil functions less as a static job and more as a developmental launchpad. However, this flexibility comes at a cost: many career moves appear ad hoc, driven by individual initiative or informal mentorship rather than structured pathways.

Organizations that treat the MSL role solely as a terminal position risk underutilizing talent and losing professionals who seek broader impact. The absence of formal career development programs can lead to misalignment between individual aspirations and organizational talent strategies.

To address this, companies should reframe the MSL function not only as a field-based medical role but as a developmental platform for future talents. The competencies developed in the role, scientific fluency, stakeholder engagement, and cross-functional collaboration mirror the demands of leadership positions across the healthcare industry.

Three developmental tracks can be formalized:

- Vertical: for those who aim to remain within Medical Affairs.
- Lateral: for those exploring roles in Access, Regulatory, or Compliance.
- Hybrid: for professionals who combine scientific depth with commercial acumen and can grow into cross-functional leadership roles.

The key is intentionality. With structured mentorship, exposure to different business units, and strategic career planning, MSLs can transition into roles that match their evolving skillsets, and organizations can build stronger internal pipelines in the process.

Conclusion

In Brazil, as elsewhere, the MSL role is no longer just a stepping stone between academia and industry; it is a springboard for leadership in regulated healthcare environments for long-term impact. By understanding how MSLs move across the professional landscape, companies can do more than just retain talent; they can cultivate the next generation of scientific leaders who are capable of navigating regulatory, commercial, and clinical complexity with equal fluency.

Investing in MSL development is not only a retention strategy, it’s a leadership strategy.

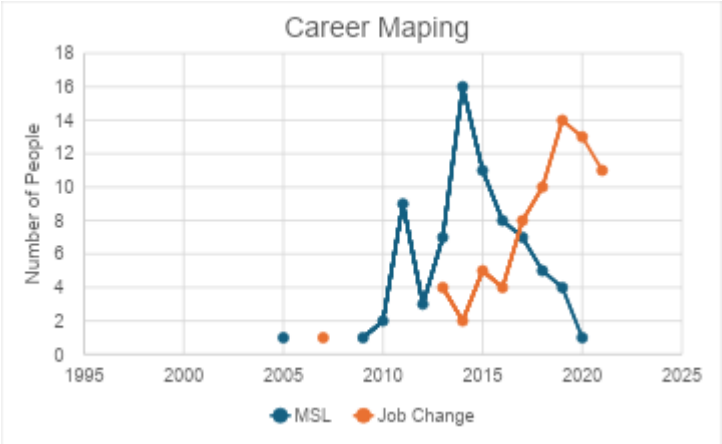

Figure 1: Career Mapping: Trends in the Number of MSLs and Career Transitions (2005–2020). The horizontal axis (X-axis) of the figure represents the years, spanning from 2000 to 2025, with a focus on the period between 2005 and 2020. This timeline illustrates the evolution of career trends over time. The vertical axis (Y-axis) indicates the number of individuals, ranging from 0 to 18, involved in each category. The blue line tracks the number of people working as Medical Science Liaisons (MSLs), while the orange line shows the number of individuals who experienced a job change. Together, these axes provide a visual representation of how MSL roles and career transitions have developed over the years.

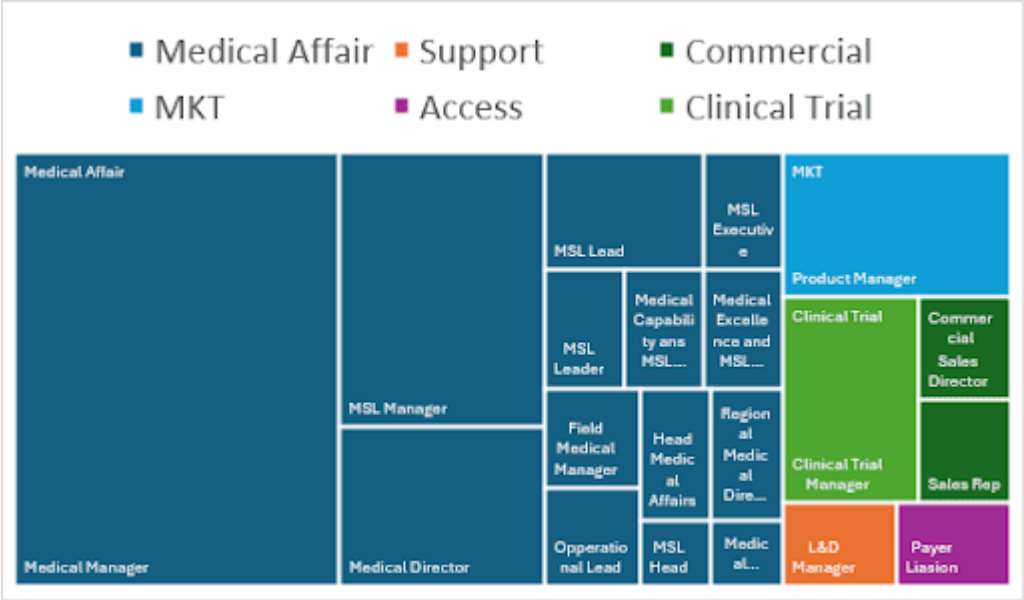

Figure 2: The MSL Career Pathways. This treemap presents a visual breakdown of roles grouped by functional areas within the Medical Affairs department. It illustrates how professionals with an MSL background have transitioned into various functions such as Medical Affairs, Support, Access, Clinical Trials, Commercial, and Marketing. Each color-coded section highlights the diversity of career destinations and reflects the shifting career paths of MSLs across strategic and operational domains.

Disclaimer: The analysis was conducted entirely independently and is not related to my current responsibilities at the company where I work. The opinions expressed are my own and do not represent those of my employer.

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Helio is a scientist, educator, and corporate learning specialist with over 10 years of experience in the pharmaceutical industry, including extensive work in oncology, antibiotics, and market access. Currently, he serves as Learning and Development Manager at MSD Brasil, where he leads cross-functional learning initiatives that integrate neuroscience, agile methodologies, and active education.

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Helio's mission is to foster continuous learning and innovation in healthcare by empowering people to become their best selves. He brings a multidimensional approach to training, bridging science, communication, and behavioral transformation in a regulated, knowledge-driven industry.

The Role of Medical Science Liaisons when Misinformation Arises in the Doctor-Patient Relationship

By Amilcar Barreto, MSc | Summer 2025

In this article, we will explore the role of Medical Science Liaisons when misinformation arises in discussions between doctor and patient due to social media posts.

1. **Introduction**
   Thanks to the digital era of information, the relationship between a doctor and a patient is now vastly different than in the past. This creates both opportunities as well as challenges. One of the most relevant current problems is that there are many individuals posting false information in their social media accounts or on their blogs and websites. Patients increasingly rely on digital sources for medical information; thus, it is likely they will come across conflicting messages versus what a professional advises, contained in deceptive content, when seeking treatment for various conditions. This situation undermines clinical trust and complicates shared decision-making. Clinicians may not know why patients act as they do, yet this paper investigates how misinformation influences patient perceptions and behavior, as well as MSLs' role in enhancing/complementing HCPs (Healthcare Professionals) Healthcare-Communication. Understanding gaps in health information dissemination can be tricky, especially among various healthcare stakeholders; a forward-thinking Healthcare Information Provider (HIP) may inadvertently lead others into believing views that are completely incorrect, ranging from patients and the general public to his/her fellow medical colleagues.
2. **Health Misinformation Influence and Its Effect on Patients' Decision Making**
   It is believed that health literacy plays an important role in the interpretation of medical information for patients to make decisions. The health landscape continues to grow more digitalized, and alongside it, so does misinformation, especially self-diagnosis among the illiterate, which can be a big challenge in this era, hence some may regard or ignore certain symptoms and conditions as they are falsely led by the social media effect. For example, a study carried out by Igbinovia et al (2021) and Apuke & Omar (2021) showed that broad categories of people will always assume unverified facts, especially if it has to do with their health during emergency situations, but in the end, they came to realize they were wrong in self-diagnosis. Emotionality, genuine concern about saving others from 'bad' situations, combined with reflexes – all these factors actively contribute to spreading deliberately false information even without full awareness.In the case of pre-eminence of misinformation among patient perceptions, trust in the relationship between the doctor and the patient is lost. This not only affects the adherence to treatment but also questions, if not undermines, physicians' authority, autonomy, and credibility. For this reason, education regarding health literacy skills in patients and professional communication with them should be improved.
3. **Social Media and Medical Communication Dynamism**
   The impact of social media in molding patient mindsets and behaviors is clear. Indeed, the role of digital platforms as channels for public health education has been highlighted in the medical industry; however, they are usually disregarded by people who fill these platforms with unregulated content. Thus, patients may seek advice online more than from their professional doctors. This shift implies that there appears to be another line of communication running parallel to the one based on evidence that might clash with an evidence-based care system.The dialogue between physicians and patients, which is already considered to be quite a complex issue, should now be examined from this perspective too. Physicians are gradually being put in a position to do not only the health advocacy bit but also debunk myths. In this regard, MSLs can provide help. They bridge science with practice, or in other words, MSLs are in the middle of things; therefore, they can help HCPs deal with issues created by digital misinformation when dealing with their patients.It is clear that MSLs serve as scientific communicators and educators within the pharma industry. The

main job of these professionals is to deliver evidence-based information to health care providers. In the context of misinformation, this function can be further extended by MSLs:

- Making sure physicians don’t follow outdated myths that have been spread in clinical practice and have been proven to be wrong by the most recent data;
- Participating in educational programs that help to achieve health literacy for doctors and patients;
- Acting as intermediaries in the development of information materials which pose a true scientific perspective and are written in an easily understandable patient language;
- Partaking in digital forums and collaborating with public health authorities to improve the accurate messaging.
- MSLs are experts in science and communication; thus, they play an indispensable role as allies in making sure that sound medical knowledge becomes prevalent in public discourse.

4. **Strategies to Fortify the Relationship Between Doctor and Patient in the Face of Misinformation**
There are various ways through which misinformation can be addressed. Concerning, for instance, the use of clear, empathetic, and jargon-free language, physicians must be well adjusted to deal with patients on a personal level. Patient education initiatives should not only consider diverse literacy levels but also different cultural settings; therefore, it is necessary to employ multimedia presentations such as videos, internet graphics, as well as multilingual material.Competency of MSLs helps to implement strategies through the creation of joint educational content and training HCPs on effective communication skills. This can also be realized in the form of moderated forums, verified health platforms, as well as reacting to false information in real time at the point of care. Community integration, such as having an organizational partnership with local leaders or engaging with other organizations, is likely to enrich these activities for reach and effectiveness.
5. **Discussion**
Misinformation poses a deep challenge for doctor-patient relations, and its effects can be felt in a lack of adherence to treatment regimens and poor health outcomes. Prevention of poor outcomes with patients presupposes application of common approaches such as bettering communication, enhanced literacy in the health care field, and professional collaboration. MSLs who have the status of trusted scientific mediators achieve this objective in rather unique ways, and they possess the necessary qualifications for this task.Investing in healthcare education and public health campaigns have the potential to boost confidence, empowering patients, as well as fostering a more resilient, knowledgeable, and equitable health system. The digital health ecosystem is going to keep changing; being proactive and informed is required and MSLs help to navigate misinformation complexities.

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Mr. Barreto is a team leader and an active player in different teams, creating integrated strategies. He has been working for almost two decades in different positions in marketing communications in the pharmaceutical industry and fast-moving consumer goods, in companies such as J&J, Roche, and Novartis

The Expanding Role of MSLs in Advancing Cell and Gene Therapies

By Sanil Sansar, PhD | Summer 2025

Cell and gene therapies (CGT) are consistently revolutionizing the ability of medicine to treat or even cure diseases that were historically difficult to diagnose and treat. Sophisticated therapies, such as Chimeric Antigen Receptor (CAR) T-cell and in vivo gene editing, work to treat diseases by targeting their underlying cause. However, with this advancement, new levels of complexity arise, such as intricate logistics and novel ethical concerns. Thus, CGTs require a fundamentally new way of field medical approach.

With 33 gene therapies, 35 RNA therapies, and 71 non-genetically modified cell therapies approved globally1, Medical Science Liaisons (MSLs) are adapting quickly to serve the specialized functions of CGT. They maintain their traditional role as facilitators of scientific collaboration and education, while also adopting new roles as strategic partners who inform operational planning, assure ethical transparency, facilitate real-world evidence generation, and build robust relationships between diverse healthcare stakeholders. They serve a critical role in seeing that these therapies get to patients safely, compliantly, and effectively.

Ethical Clarity in a High-Stakes Environment

CGT therapies are viewed as a breakthrough by patients, caregivers, and providers, which creates heightened excitement. The excitement is accompanied by an obligation to manage expectations carefully. MSLs are well-placed to assist providers in

achieving that balance by providing timely, balanced, and scientifically valid information.

Most CGTs are designed as one-time treatments, but they may pose unforeseen long-term risks. MSLs enable knowledgeable clinical decision-making by providing clinicians with extensive details to inform patient deliberations. With regulatory agencies demanding prolonged safety monitoring from 5 to 15 years2, MSLs assist treatment centers in adhering to long-term follow-up guidelines, gathering post-treatment data, and instituting documentation processes that promote patient safety and meet regulatory requirements.

Real-World Evidence and Post-Approval Commitments

Many CGTs receive approval based on limited clinical trial data due to the rarity or urgency of the condition. Therefore, long-term safety and efficacy need to be demonstrated in the post-approval environment, highlighting the importance of real-world evidence. MSLs play a crucial role in collaborating with sites to enable long-term follow-up studies, to identify investigators for post-marketing studies, and to determine the necessity for registry involvement. They also make certain that information is recorded properly and is of clinical significance. In certain instances, MSLs assist in communicating these results to payer organizations, illustrating the long-term value and effectiveness of treatment results beyond clinical trials.

By working in coordination with health economics and outcomes research (HEOR) teams, MSLs provide insights into how patients change over time. These findings underpin reimbursement systems and form the foundation for increasing access to these treatments as they move toward wider clinical application.

Operational Preparedness: A New Horizon

CGT administration is frequently very personalized and time-critical, necessitating exact interdepartmental coordination. Every step, beginning with apheresis to cell processing to infusion of the final product, must proceed faultlessly. MSLs play a significant role in getting new sites ready for CGT administration. They assist in onboarding procedures, train clinical personnel on chain-of-custody and identity practices, and offer storage, handling, and administration guidelines.

This participation illustrates the broader reach of the MSL’s role within CGTs. In this setting, MSLs are collaborative partners, aiding in the overcoming of regulatory, logistical, and site-specific obstacles. When issues such as production delays or cell viability issues occur, MSLs are frequently the first to recognize the issue, provide internal coordination, and deliver timely resolutions to healthcare providers. Their involvement is critical in keeping therapies on schedule and in compliance with regulatory standards.

A Wider Stakeholders Network

Due to the wider stakeholder network requirement in CGT, MSLs often interact with more than physicians. They deal with clinical pharmacists, genetic counselors, infusion nurses, transplant coordinators, lab technicians, payers, and even hospital policy makers. Every audience requires a specific approach. A genetic counselor might request the mechanism of action information, whereas a payer might request comparative outcomes or long-term safety data. CGT MSLs need to be able to communicate complex science into meaningful, accurate messages for each audience.

Internally, these MSLs communicate field intelligence to regulatory, operations, field quality, process optimization, market access, and commercial teams. This cross-functional alignment helps to elevate real-world issues early and resolve them through synchronized, nimble responses.

Advancing Competencies for a New Era

To be successful as CGT MSLs, they need to acquire a unique skill set. They need to be experts in molecular biology, immunology, and gene editing. A firm understanding of data analysis, pharmacovigilance, and international regulatory environments applicable to advanced therapies is thus essential.

Soft skills and emotional intelligence are in high demand in this groundbreaking space. MSLs need to establish trust at speed, convey information accurately, and be flexible in the face of rapidly changing timelines, safety data, or logistical requirements. Most are investing in professional development with CGT-focused training programs, participating in advanced therapy workshops, and gaining experience in such areas as health economics, supply chain logistics, and prolonged patient monitoring. The synergy between scientific knowledge and operational adaptability defines a successful CGT MSL, a trait that will only gain relevance as the field progresses.

Conclusion

Cell and gene therapies are revolutionizing, with MSLs at the forefront. Their work includes implementation, education, safety monitoring, and long-term success of these complex therapies. CGT MSLs bring scientific rigor to clinical delivery. They connect departments, streamline workflows, and assist patients in receiving novel therapies safely and effectively.

As additional CGTs are approved, the need for successful MSLs that lead with both scientific and operational capabilities will grow. Investing in their development is not merely a good strategy; it is imperative. By cultivating CGT MSLs, organizations can help turn the amazing promise of advanced medicine into real, meaningful, and lasting outcomes for patients.

Disclosure:
The views, thoughts, and opinions expressed in this article belong solely to the author and do not necessarily reflect the views or positions of any other individual, organization, employer, or company associated with them.

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Sanil brings deep expertise in engaging transplant centers, interpreting complex data, and identifying unmet needs in stem cell transplantation and multiple myeloma areas. He has played a key role in onboarding major academic institutions, developing tailored engagement plans to drive awareness and optimize clinical integration of novel therapies. Sanil is passionate about improving patient access to transformative therapies and continues to advocate for innovation in hematologic malignancies and cellular medicine.

Stuck in the Middle: Why Measuring Medical Affairs Impact Matters More Than Ever

By Paul Riley, MBA, PhD, CMgr | Summer 2025

Medical Affairs is a tough job. You're not quite clinical, not quite commercial—but somehow expected to support both. You're meant to bring scientific rigour and credibility to the organisation, while also enabling uptake and positioning products for success. You're there before launch, during launch, and long after. And yet… you're rarely the one credited with making the difference.

Sales gets credit for changing prescribing. Marketing gets credit for national campaigns and strategy. Clinical gets credit for generating the data in the first place. But what about Medical?

The Reality: Always On, Rarely Seen

Medical is involved from early development through to loss of exclusivity. Clinical colleagues look to you to help make the trialled medicine commercially viable. Marketing looks to you pre-licence to do the things they can't do. Then post-licence, they still rely on Medical to keep laying the groundwork—but from a non-promotional, influence-based position.

It's a big middle. Medical spans years of activity that are hard to measure, hard to fund, and hard to point to when results come in. Yet Medical Affairs is expected to change the evidence base, shift beliefs, and move mindsets—so that others can move prescribing.

The Problem: No Feedback Loop

Sales teams operate with data. Within months of an activity, they can see market share change—and whether an intervention worked. National marketing campaigns can often be correlated with uptake trends. But for Medical?

You're expected to inform strategy, shape engagement, lead education, support evidence generation, and provide insight. Yet when it comes to evaluating success, you're left with proxies: number of MSL interactions, advisory board outputs, publications, maybe an NPS score.

But here's the thing: in science and in clinical practice, when hard data isn't available, we turn to structured expert opinion. So why not apply the same logic to evaluating Medical Affairs?

The Solution: Structured Feedback from the Field

If you want to understand Medical's impact, you have to ask the people Medical is meant to be influencing:

- Are clinicians *thinking differently* after the MSL engagement?
- Do payers *understand the value proposition* in a clearer way?
- Are internal stakeholders *better aligned* because of Medical insight?

These aren't questions that can be answered with CRM metrics or activity logs. They require structured, thoughtful primary research. Interviews. Focus groups. Social listening. They require asking the right questions—and interpreting the answers with nuance.

Rather than relying on activity metrics alone, Medical Affairs professionals can gather meaningful feedback by engaging the stakeholders they aim to support—clinicians, payers, pharmacists, and cross-functional colleagues. This can be achieved through primary research techniques such as structured interviews, facilitated discussions, surveys, and even social listening, all designed to explore how perceptions, understanding, and behaviours may have shifted as a result of Medical activity.

Good practice involves interpreting this feedback through a rigorous, systematic lens—identifying themes, triangulating insights, and translating them into formats that support planning and decision-making. Increasingly, teams are also exploring how tools like natural language processing can assist in analysing qualitative data efficiently and at scale. While these technologies should not replace human judgement, they can enhance consistency and speed in identifying emerging signals and making sense of complex inputs.

The goal is not simply to justify the value of Medical Affairs, but to inform continuous improvement, sharpen strategic focus, and ensure that Medical teams remain aligned with the evolving needs of the system and the people they serve.

Closing Thoughts

Medical Affairs doesn't need to wait for someone else to give it credit. It can—and should—create its own feedback loops. Insights gathering by relying on field teams does not work; it gets in the way of the job to be done and is confounded by conflicts of interest. Independent and objective primary research is the way forward. And it is something that Medical Affairs people are inherently suited to and good at.

So let's start measuring impact in a way that reflects what Medical actually does. That means structured expert opinion. It means asking the right questions. And it means turning those insights into something that senior leaders can understand and act on.

Medical is strategic, scientific, and essential. It's time we proved it.

Disclaimer: *This article was created with the help of AI (ChatGPT). All concepts and topics were developed by the author.*

About the author:

Paul Riley, MBA, PhD, CMgr

Paul Riley is the founder of Nexcea, a UK-based consultancy that helps pharma companies commercialise medicines in a clinically meaningful way. He leads projects that turn real-world insights into strategy, supporting Medical Affairs teams in the UK, Europe, US, and Japan. He also serves as adjunct faculty at Alliance Manchester Business School.

The Art of Being an Impactful MSL Being ghosted by a KOL

By Kimberly Cremers | Summer 2025

Been ghosted? Ghosts might not be real, but 'ghosting' is for sure. It is ubiquitous in our society, happening in both our personal and professional lives. It may leave us confused and uncertain, especially if we were just actively engaged in discussion with someone or are following up to address a question they posed. Keep in mind that people are busy and pulled in many directions, so it's not personal (even though it feels very personal). Sometimes it's okay to let it go, but if this happens in our professional setting, particularly with a KOL, it's likely that we should not walk away, and we really cannot walk away. The art of being an MSL includes keeping the communication flowing and reinitiating that conversation if ghosted.

If you've been ghosted by the KOL, what's your next step? An MSL's job is to engage in scientific discussion with KOLs on topics

relevant to their work, whether that is related to company initiative, new data that is important for their patients, or to address a question they've raised. Here are a few options to consider using the art of being an MSL.

Have you contacted the KOL via their preferred method of communication…or differently? Really, have you? Be honest here. Many MSLs respond with "Duh, of course I did." But on further reflection have you really taken the time to think it through? With the multitude of ways to communicate and the enormous amount of data coming at us throughout the day, it's important that we understand how this specific KOL not only likes to receive information, but also what they hate, and what they are seduced into reading. Don't know the answer? ASK!!

What strategy worked best in the past? Is email really the best tool or is a short text message more likely to garner their attention? Or is it a voicemail at a time when you know they won't answer? Change it up.

- Shorten that email and ensure you're not burying the lead.
- Text at a different time of the day.
- Make that voicemail about them, not you. "I was thinking about you today and I remember you said _____. I loved that and mentioned it to my spouse. She/He said I should have asked you _____. So can I get a bit of time with you, so my spouse stops asking me?!"

Are you using the subject line to talk about yourself or about their patients? An idea that we know will work is to think about patients, patients, patients! Physicians are big on patients. Then think about the problem the KOL has with those patients. You have a blink of an eye to catch them with an email. Do you really want it saying, "Just following up" or "Long time no see" or "(name of your drug) breakthrough." Don't be like everyone else.

- What email subject lines attract and detract your attention?
- Be clear and concise with your request!

Upon reflection have you realized you don't know this KOL's preferred method of communication? Ask the KOL directly… text or email? Voicemail? Carrier pigeon? Consider asking them what they really, really hate about MSL communications…. many will happily tell you story after story. That you even asked gives you bonus points. Whether you believe in ghosts or not, I'll bet they like the attention when they discover that you are listening. Start this conversation when you profile a KOL and check back periodically to ensure things haven't changed.

- Ask your KOL their preferred method of communications and adjust accordingly.
- Implant in your brain: W.A.I.T. (Why Am I Talking?) just listen for the preferred and the non-preferred.

One aspect of preferences is frequency of communication. Some KOLs appreciate more frequent contact while others thrive on contact for a specific topic. Be sure you've included this question… maybe ghosting is due to what they consider to be an overwhelming number of communications. Maybe they focus on emails on Friday afternoon and, in fact, haven't ghosted you at all, they just haven't gotten to it just yet.

- Determine when the KOL is more likely to have time to answer you.
- If your initial communication isn't answered, ask them what the right cadence for follow-up is for THEM

What is the content of the email you've sent… just "checking in" or have you made a specific request? Was your email too vague for them to understand that a response was expected? Develop the habit of scheduling the next meeting at this meeting. Getting your next meeting on the calendar helps to avoid the opportunity to get ghosted altogether.

- Get to the point and ensure the subject line is clear.
- Finish your meeting with "What's the best time to meet you next month?" or "What's the best way to keep you updated on the latest information?"

Are you struggling with how and when you should reach out to the KOL again? Ensure you've given them at least a week to respond, responding to the same email chain (if that was your original mode of communication) and using words that garner their attention. The book "Exactly what to say" by Phil M Jones gives some phrases that may be effective to generate results. In this scenario using a "When would be…" or "I'm guessing you haven't…" or "If you give me a chance…" opening line may do the trick.

Did you ghost someone this week? What made you decide to respond to certain communications? Monitor who you respond to and what messages you left unanswered. This self-reflection will provide insights into changes you need to make to your own communications. Did you find those emails easier to read? If so, why? Perhaps you are like more than 85% of people

and use your phone to read/screen emails. Where the communication burdensome to read or perceived as requiring effort to answer? Probably not! This is an important consideration when crafting an email, you want people to open!

- What prompted you to respond or not?
- Keep your emails short and to the point.
- Use bullets instead of long paragraphs and complex sentences

Was a specific question asked and easy to answer? I know I respond to that style email more quickly. Seeing a long text or email results in my closing it down until I have more time to read through it… and hopefully I remember to mark it unread, so it gains my attention again!

- Frontload your communication (and your subject line) with a call to action or question and fill in the details in the following paragraph.
- Reframe the question from "would you like to…" to "when is a good time to…" or "which of these times work for you…" versus "when is a good time for you" to strengthen your request.

Did you respond because a deadline was given? Providing a deadline a few days away may result in a quick response. If the deadline is weeks away, it may result in a delayed response due to the thinking of "I have plenty of time to make this decision" or "I have no idea what I'm doing in 6 weeks."

- Include "Why" when appropriate as that may save back and forth emails and will help garner a response.
- Provide deadlines / options that are in the near future to avoid enticing procrastination

After asking the KOL for their preferred communication style, putting that into practice as well as the other techniques outlined in this series of posts, and continue to be ghosted, talk with your colleagues. Reach out to an MSL who is practicing the art of being an MSL (the "MSL's MSL" per se) and learn their techniques. Pose the question and listen (WAIT… Why Am I Talking (discussed in our LinkedIn community the "Art of Being an Impactful MSL")). You are not alone in this so use the transformational skills you've learned and turn "ghosting" into a thing of the past.

About the authors:

Kimberly Cremers, PharmD

Kim Cremers, PharmD, is a licensed pharmacist with over 20 years of experience in medical affairs within the pharmaceutical and biotech industry. Throughout her career, she has demonstrated success in leading medical affairs teams across six companies, handling products throughout their lifecycle and spanning various therapeutic areas. Presently, she utilizes her extensive background as an external consultant, aiding organizations in the development or enhancement of their Medical Affairs capabilities, specifically MSLs.

As the Founder and CEO of Petrichor Medical Affairs Consulting, Dr. Cremers provides strategic guidance, planning, training, and executional support tailored to organizations seeking to establish, optimize, or expand their MSL team. Aligned with her passion for teaching about the pivotal role of pharmacists within the industry, Dr. Cremers has developed and teaches "Introduction to the Pharmaceutical Industry" to graduate pharmacy students providing comprehensive insights spanning the drug development

continuum, from early-stage development to Medical Affairs, including the role of our commercial colleagues. Kim partners with Kevin O'Connor to provide insights from the PharmD and Executive Coach on a LinkedIn group called "The Art of Being an Impactful MSL".

Kevin E. O'Connor, CSP, CEC

Kevin E. O'Connor, CSP, CEC is an executive coach, professional speaker and teacher. Kevin holds three Masters degrees and his expertise focuses on scientific professionals who are charged with leading and influencing medical professionals. He teaches graduate students at Chicago's Loyola University, is faculty for the American Association for Physician Leadership (AAPL) and the American College of Healthcare Executives. (ACHE). Kevin partners with Kim Cremers, PharmD to provide insights from the PharmD and Executive Coach on a LinkedIn group called "The Art of Being an Impactful MSL".

From the Clinic to the Collaboration Table: A Primary Care KOL's Perspective on Elevating MSL Engagement to Improve Patient Outcomes

By Justin D Pykare, DNP, APRN, FNP-BC, NI-BC | Summer 2025

Abstract

Medical Science Liaisons (MSLs) serve a critical role in bridging biopharmaceutical science with real-world patient care. As a primary care Key Opinion Leader (KOL), I've had the opportunity to collaborate with MSLs across multiple therapeutic areas and companies. This article provides an experiential lens into the evolving relationship between MSLs and KOLs. It outlines actionable strategies MSLs can use to improve clinical partnerships, enhance scientific exchange, and ultimately impact patient outcomes through stronger collaboration and tailored engagement.

Introduction

The relationship between a Medical Science Liaison (MSL) and a Key Opinion Leader (KOL) has the potential to be one of the most impactful partnerships in the healthcare ecosystem. As a KOL practicing in primary care, I rely on clinical data, practice guidelines, and treatment innovations that are both evidence-based and practical for real-world implementation. MSLs are uniquely positioned to support that mission. This article will offer my perspective as a practicing clinician and KOL to help MSLs understand what we value most, how they can improve interactions, and how strategic collaboration can translate into real-world patient outcome improvements.

Understanding the KOL Perspective

KOLs sit at the intersection of clinical care and clinical influence. We manage complex patient panels while serving as educators, researchers, and system-level advisors. We are time-constrained, evidence-hungry, and always seeking data that can immediately be translated into care decisions. From my viewpoint, MSLs are most impactful when they:

- Understand my patient population and clinical priorities
- Bring information that is timely, actionable, and practice-relevant
- Engage in longitudinal, trust-based relationships—not one-time exchanges

An ideal MSL-KOL interaction feels like a strategic partnership built on shared goals, rather than a transactional or product-driven exchange.

Elevating the MSL-KOL Relationship

1. **Lead with Clinical Curiosity**
   A successful MSL starts with listening. MSLs who begin with "Tell me more about your practice" earn trust faster. Learn what matters to us. For example, I care deeply about health equity, preventative health screenings and wellness, and integrating digital tools for chronic care. MSLs who recognize those areas and bring aligned data or insights are far more effective. One-size-fits-all approaches rarely succeed. Personalization and perpetration make a difference. MSLSs should ask meaningful questions, revisit past conversations, and arrive informed. From my experience, I respond best to MSLs who value my time and offer real, practice-relevant insights.
2. **Translate Data into Decisions**
   MSLs should serve as conduits of meaningful, evidence-based insights. Beyond presenting data, successful MSLs synthesize clinical implications, identify practice gaps, and encourage thoughtful discussion. For example, discussing real-world data related to my primary care population, rather than purely trial-based efficacy results, has significantly enhanced my ability to incorporate new interventions into practice. KOLs need clinical trial data contextualized for our patient populations. Don't just present efficacy endpoints—discuss limitations, subgroup nuances, and real-world application. The best MSLs help connect the dots from data to action.
3. **Be a Conduit for Innovation**
   MSLs are at the forefront of emerging science. Introduce digital health tools, predictive analytics, and AI-enabled decision support systems. These tools help us improve workflows and outcomes. For example, MSLs who bring value-based care insights or real-world data are helping me transform how I practice. MSLs who bring value through visual dashboards, measure-based education, or integration of clinical decision support tools into the workflow make a larger impact. MSLs must evolve with the health tech space, understanding clinical quality measures and the metrics that matter in value-based care.
4. **Support Research and Thought Leadership**
   MSLs who recognize KOLs as collaborators in knowledge generation rather than passive recipients of information build trust. Whether it's supporting investigator-initiated trials or connecting KOLs with emerging research opportunities, proactive thought partnership is powerful. Encourage investigator-initiated trials (IITs), connect us with research opportunities, and help us disseminate clinical insights. MSLs who proactively support these efforts deepen their scientific partnership with KOLs.

Improving Patient Outcomes Through Collaboration

Ultimately, the collaboration between MSLs and KOLs must translate into patient benefit. Whether by elevating the standard of care, introducing therapeutic innovations, or co-creating educational content for frontline clinicians, this relationship should center around improving health outcomes. KOLs don't need more meetings—we need meaningful engagement that changes how we treat patients. Strong MSL relationships support:

- **Faster integration of novel therapies**
- **Evidence-based prescribing**
- **Quality improvement efforts within health systems**
- **Access to cutting-edge data for underserved populations**

When MSLs align their support with what we're already trying to improve, the results are transformational.

Recommendations for MSLs

- **Be consistent:** Build trust through regular touchpoints, not just during product launches.
- **Stay clinically grounded:** Speak the language of outcomes, not sales.
- **Offer value beyond the visit:** Summarize insights, share new publications, and connect us with broader

thought leadership opportunities.

- **Embrace two-way dialogue:** Ask for our feedback and be open to how your science is perceived in real-world care.

Figure 1

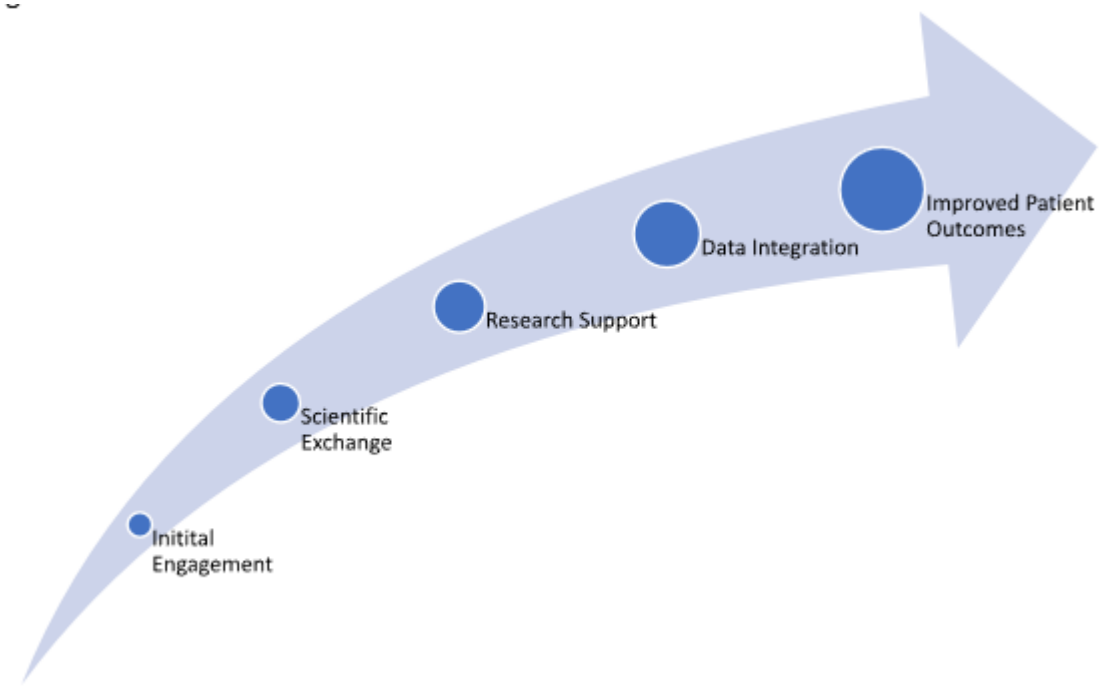


Figure 1. Ideal MSL-KOL Collaboration Framework. This diagram illustrates the optimal progression of collaboration between a Medical Science Liaison (MSL) and a Key Opinion Leader (KOL), beginning with initial engagement and evolving through scientific exchange, research support, and data integration, ultimately leading to improved patient outcomes.

Conclusion

The MSL-KOL partnership is an underutilized lever for improving patient outcomes. From my perspective as a primary care KOL, the most impactful MSLs bring curiosity, humility, and strategic insight to every interaction. They support not only the science but the clinician behind it. If we want to elevate healthcare together, we must move beyond the transactional and toward the transformational. Let’s make collaboration the standard, not the exception.

Disclaimer: *This article was created with the help of AI (ChatGPT). All concepts and topics were developed by the author.*

About the author:

Justin D. Pykare, DNP, APRN, FNP-BC, NI-BC

Justin Pykare is a board-certified Family Nurse Practitioner and serves as the Director of Health Informatics at a Federally Qualified Health Center (FQHC). A four-time graduate of Kent State University, he holds a Doctor of Nursing Practice degree and is board-certified in Health Informatics. With a strong background in clinical leadership, Justin is passionate about leveraging technology to improve patient outcomes, enhance workflows, and support high-quality, value-based care. Outside of work, he enjoys running, exercising, and spending time with his wife and their five children. Justin is deeply committed to his faith, family, and the mission of serving underserved communities through compassionate, innovative care.

Medical Science Liaisons: Utilizing Insight to Drive Medical Technological Innovations

By Christopher Simmons, PharmD | Summer 2025

Medical Science Liaisons (MSLs) play a pivotal role in the healthcare industry, bridging the gap between academia, research, and clinical practice. They find themselves in new horizons, constantly adapting with new technology while transferring key insights with Healthcare practitioners (HCPs), key opinion leaders (KOLs), and internal stakeholders. Their unique insights into the medical landscape are instrumental in driving technological advancements that improve patient outcomes. This article delves into three key areas where MSLs leverage their expertise to catalyze innovation: identifying untapped areas within the healthcare ecosystem, promoting preventative care, and fostering the development of cutting-edge technologies.

Before we explore the main topics, let’s first establish a clearer understanding of insights, drawing on definitions from prominent Medical Affairs leaders. These come from the panel discussion “Medical Affairs as the Powerhouse of Data-driven Insights & Technology Innovations” at the Annual Summit on Medical Affairs (ASMA) US Chapter held on August 23rd, 2024.

- Vivek Mukhatyar, Generative AI Medical Engagement Lead, describes insights as “Actionable intelligence that is grounded in data that comes from a variety of different sources”.
- “A focus on data to get a detailed, clearer picture to better understand the medical landscape” (Arta Subagiarta, Global Medical Affairs | Healthcare Strategy and Innovation)
- “Meaningful information, peeling layers of data/information to reach meaningful data that can be actionable” (Shashi Adsul, Sr. Director, Global Medical Unit Head-Entyvio & New Programs IBD)
- “From a clinician’s perspective, Actionable knowledge, because it is being given to HCPs/KOLs and they are learning from it… More focus on problem solving rather than problem reporting.” (Ami Bhatt, MD, Chief Innovation Officer | AI & MedTech Leader Driving Global Healthcare Transformation)

Insights are a key component of MSLs and the healthcare system as a whole. As we continue to the key points of the article, it is very important we fully grasp the concept and importance of insights and how to make them actionable in creative as well as innovative ways.

1. **Identifying Untapped Areas: The MSL's Role**
   MSLs are instrumental in building credible relationships with KOLs and internal stakeholders by consistently providing fair and unbiased medical and scientific information. This commitment to objectivity cultivates profound trust and respect, establishing the MSL as a highly reliable and integral partner.MSLs possess a unique understanding of the medical landscape, enabling them to identify untapped areas where scientific research and clinical practice intersect. By engaging with HCPs/KOLs, researchers, and industry experts, MSLs uncover unmet medical needs and emerging trends. This knowledge is crucial for guiding the development of innovative technologies that address specific patient challenges.For example, MSLs recognize a gap in the availability of diagnostic tools for a particular disease. By sharing this information with researchers and technology developers, they facilitate the creation of new diagnostic methods that improve patient outcomes. Additionally, MSLs identify opportunities for the application of existing technologies in new clinical settings, expanding their potential impact.
2. **The Power of Preventive Care: A Technological Frontier**Preventive care is a rapidly growing area of focus within healthcare, emphasizing the importance of early intervention and disease prevention.In a 2019 article by Mckinsey & Company, they showed several healthcare organizations that have started to embrace the full capabilities of analytics and digital technologies which are realizing savings. Healthcare journey analytics help identify specific patient populations that need support and determine missed medication refills. Technological tools and journey-based insights are used to engage with patients and have major impacts on keeping patients adherent throughout their journey in the healthcare system, prompting positive behavior changes. We've seen firsthand how companies achieve a 10 to 20 percent reduction in administrative burdens for the same level of impactful outreach. Optum, a health insurer, used these approaches to change its care management program and achieved a 2:1 return of investment (ROI). Additionally, Kaiser Permanente realized a 25-30% reduction in Emergency Department (ED) visits. Think of the impact: Nurses receive clear, digital guidance on care protocols, and the automation of tedious tasks like dialing patients or rapid note-taking. This shift allows the clinical care management team to dedicate their energy where it matters most, directly with patients.MSLs play a significant role in driving technological advancements that support preventative care initiatives. By understanding the needs of patients and healthcare providers, MSLs identify opportunities for the development of innovative tools and strategies. One example is the development of wearable devices that monitor vital signs and detect early signs of disease. Personalized medicine plans are another area where technology supports preventative care. MSLs help to identify patients who may benefit from targeted interventions based on their genetic makeup or other factors. By working with researchers and technology developers, MSLs facilitate the creation of personalized treatment plans that improve patient outcomes.
3. **Technological Innovations: The MSL's Impact**MSLs are instrumental in driving technological revolution within the healthcare industry. Their insights and expertise are essential for identifying unmet medical needs, guiding research efforts, and ensuring that new technologies are developed and implemented effectively. By bridging the gap between science and technology, MSLs contribute to the development of innovative solutions that improve patient care. These improvements lead to an increase in the quality-adjusted life-years (QALYs) of the 50-year-old mailman with COPD who is the pulse of his community, the busy diabetic mother of 3 who is also juggling family life dynamics, or the college student newly diagnosed with T1DM in the middle of the semester. By actively participating in the development and implementation of innovative technologies, MSLs make a significant impact on not just the future of healthcare but also patients across our communities.For example, MSLs help to facilitate the adoption of new technologies by providing education and support to healthcare providers. DiabeTECH©, as described by Andrew Whigham, " Offers a smart shoe system to prevent diabetic foot ulcers. Our unique solution integrates continuous monitoring of vital signs, gait, and physiological parameters, providing actionable insights to patients and physicians. This proactive approach ensures early intervention, minimizing the risk of ulceration. This novel solution aims to strengthen the connection between podiatrists and diabetic patients using existing, low-cost instrumentation." DiabeTECH© is an exemplary example of combining preventative maintenance for patients and innovative technology seamlessly, and I am pleased to be a collaborator with Andrew Whigham in his future endeavors.

Conclusion

Medical Science Liaisons play a critical role in advancing healthcare by bridging the gap between scientific research and clinical practice. Their insights are invaluable in identifying untapped areas within medical science and fostering the development of innovative technologies. By focusing on preventative care and leveraging the power of technology, MSLs contribute to improving patient outcomes and transforming the healthcare landscape. As aspiring, new, and experienced MSLs, we have the opportunity

to make a lasting impact by driving technological innovation and advancing the field of healthcare.

About the author:

Christopher A. Simmons, PharmD

Christopher Simmons is an Aspiring MSL coming from a community pharmacy setting. With over 8 years of experience in community pharmacy settings. Presenting at ASMA, SUSOP, and SCCM, to name a few of the various speaking engagements he has participated in over the years. Chris's presenting style captivates audiences with his ability to incorporate story with data, making a lasting impact on audiences. He is passionate about improving patient care, particularly in diabetes management. Known for his infectious personality and strong connections within the healthcare industry, he excels at building relationships and fostering a collaborative work environment. Christopher is committed to staying up-to-date on the latest advancements in diabetes care and regularly shares his knowledge through speaking engagements and educational initiatives. His ability to simplify complex information and his focus on patient-centered care make him a great connector of many throughout the healthcare ecosystem.

MSL Impact and KPI Perception: A Comparative Look at MSLs and Leaders in the U.S. and Spain

By Verónica Melero, PhD | Summer 2025

The role of the medical science liaison (MSL) within the medical affairs department is crucial in the pharmaceutical industry, playing an essential role in the exchange of scientific information between the pharmaceutical company and healthcare professionals (HCPs). Defining appropriate metrics and key performance indicators (KPIs) could support the aims described in the medical plan in line with the company's goals [1].

Establishing suitable KPIs is not only necessary to measure professional performance, but also to observe whether planned strategies are being implemented, detect possible plan updates, and assess the impact the MSL is having in the field [2].

KPIs are divided between qualitative and quantitative metrics, which can offer several ways to evaluate the impact and performance of the professional. To some extent, qualitative variables suggest a broader view of performance, evaluating in a more specific way the quality of the work performed. However, they are more subjective and difficult to measure. Among the qualitative measures are found, for instance, the quality of interactions with the key opinion leaders (KOLs). On the other hand,

quantitative metrics offer an objective, quantifiable evaluation of the work carried out by the MSL, such as the number of interactions with KOLs carried out or the number of scientific presentations delivered. These measures can provide performance information in certain aspects; however, the impact of each of them cannot be assessed [2].

Furthermore, within the department itself, there may be differences of opinion stemming from different positions or roles. There may also be differences between countries in how KPIs are evaluated and in the relevance of metrics.

Thus, the primary endpoint of this review is to compare potential differences of opinion regarding the KPIs used to measure MSL performance between the MSL and MSL head positions in the global report, and as a secondary aim, to compare the results provided by the United States of America (USA) with those obtained in Spain based on the global and USA report conducted by the MSL society [3].

MATERIALS AND METHODS

This review analyses the cross-sectional study carried out by the MSL society to evaluate the performance of MSLs. The review evaluated the two documents released in 2024 by the Medical Science Liaison Society regarding the medical affairs field, as well as globally in the USA. These reports represent the second comprehensive assessment conducted by the MSL Society.

Study design

The surveys were previously pretested by a specific group of MSL and MSL head professionals who guaranteed the accuracy of the questions. All participants were part of the medical affairs department. The negative response to belonging to an MSL role or similar was the only exclusion criterion. This questionnaire was distributed via LinkedIn, and only those completed surveys were used for the evaluation conducted for three months (March to May 2024).

In the survey analyzed, a section with responses from all roles in the medical affairs department was found. This makes it easier to see the perspectives as well as the convergences and divergences between positions. The questionnaires consist of multiple-choice questions with five possible answers. For each possible answer, the percentage of respondents is shown. The main topics in the survey include the perception of the importance of qualitative and quantitative metrics used to measure MSL performance; the most used metrics, and whether these metrics properly measure the quality of performance in MSL.

Participants

A total of 1023 professionals from different positions (MSL / Sr. MSL / Medical Advisor (or other equivalent title), Manager / Director of MSLs (or equivalent title), Executive Management/ Vice President of Medical Affairs, MSL Excellence/ Operations, Other) from 63 countries participated in the global report. The report, conducted exclusively in the USA, involved 573 professionals.

RESULTS

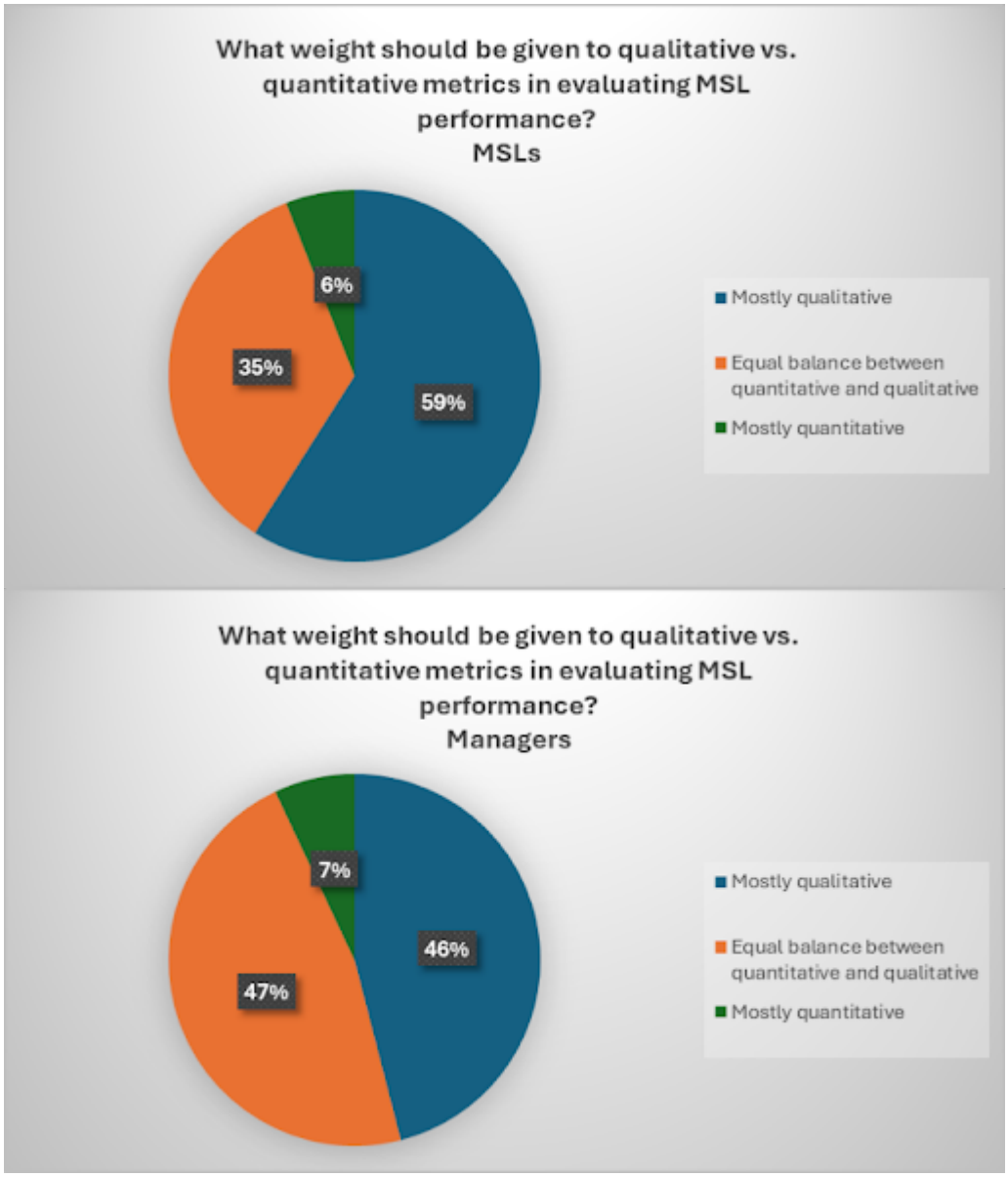
MSL vs Managers positions comparison

When comparing the responses between the MSL positions and the managers, there are many points on which MSLs and managers have similar opinions. However, the most remarkable opinion differences found in the surveys are what will be analyzed:

A smaller percentage of managers believe that the most frequently used metric should be qualitative (46%) and the need for a better balance between the two metrics (47%), unlike the MSLs (59% of them think they should be mostly qualitative and 35% should be an equal balance between the two kinds of metrics). **(Figure 1)**. Furthermore, a higher percentage of managers believe that the most used quantitative metric should be the number of KOL engagements (73% of managers vs. 59% of MSLs).

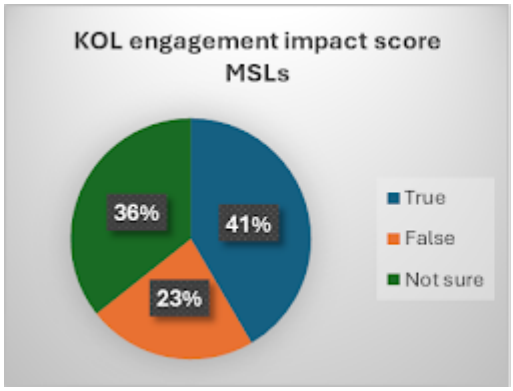
Figure 1. Differences of opinion between MSLs and managers as to which metrics should be used.

Regarding using KOL engagement impact scores, a combined metric that quantitatively assesses the effectiveness and influence of interactions between MSLs and KOLs, in the case of MSLs, 42% think



Regarding using KOL engagement impact scores, a combined metric that quantitatively assesses the effectiveness and influence of interactions between MSLs and KOLs, in the case of MSLs, 42% think it should be used, while 36% do not. Conversely, 61% of managers believe it should be used, while 16% do not, and 23% are unsure. **(Figure 2)**

Figure 2. Differences in KOL engagement impact score between MSLs and managers.



Regarding the qualitative metrics currently used in companies to measure the performance of MSL, it is noteworthy that 66% of MSLs believe that feedback from the direct manager is currently being used, followed by feedback from the internal stakeholder, with 47%. Among managers, 77% agree with the first point and 59% with the second. As for whether MSL interactions are well-defined, 73% of managers vs. 65% of MSLs think so.

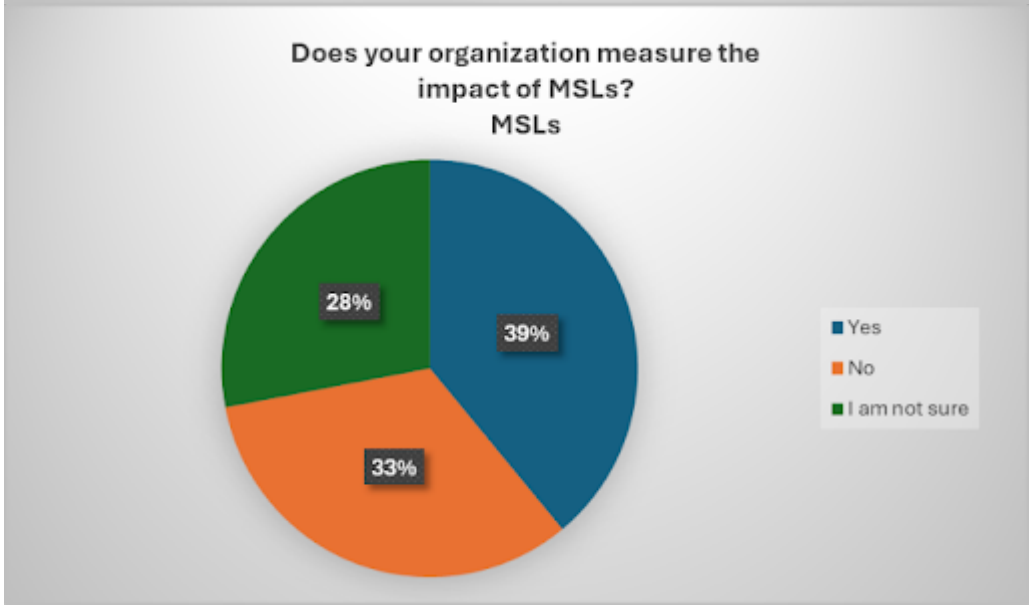
To the question, how do you define the value of an MSL within your organization?" MSL positions showed assigned the highest percentages to "their ability to build and maintain strong relationships with KOLs"(27%), "It's subjective based on what internal leadership thinks MSLs should be doing to contribute to the company" (29%), and "through the quality and depth of scientific knowledge and expertise they provide" (19%). In the case of managers, they had a similar opinion, however, a lower percentage (17%) believe that "it's subjective based on to what internal leadership thinks MSLs should be doing to contribute to the company". **(Table 1)**

MSLs	Managers
27% "By their ability to build and maintain strong relationships with Key Opinion Leaders (KOLs)"	**28%** "By their ability to build and maintain strong relationships with Key Opinion Leaders (KOLs)"
29% "It's subjective based on what internal leadership thinks MSLs should be doing to contribute to company"	**17%** It's subjective based on what internal leadership thinks MSLs should be doing to contribute to company
19% "Through the quality and depth of scientific knowledge and expertise"	**20%** "Through the quality and depth of scientific knowledge and expertise they provide"

Table 1. Differences between MSL and manager positions in terms of defining de value of MSL's role in the organization (majority response percentages).

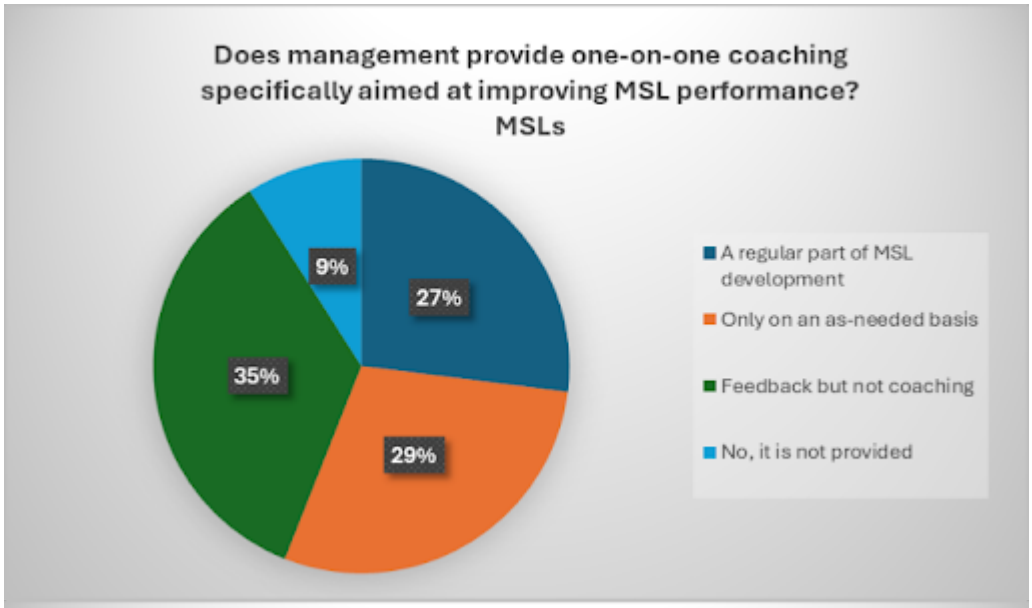
Furthermore, depending on the company, 42% of managers believe that their company does measure the quality of MSL performance, while the remaining 49% of respondents believe it is not clear enough. In the case of MSL positions, a higher percentage (39%) think the impact of MSL is being measured, compared to 33% who think it is not. Twenty-eight percent of respondents claimed not to be sure. **(Figure 3)**

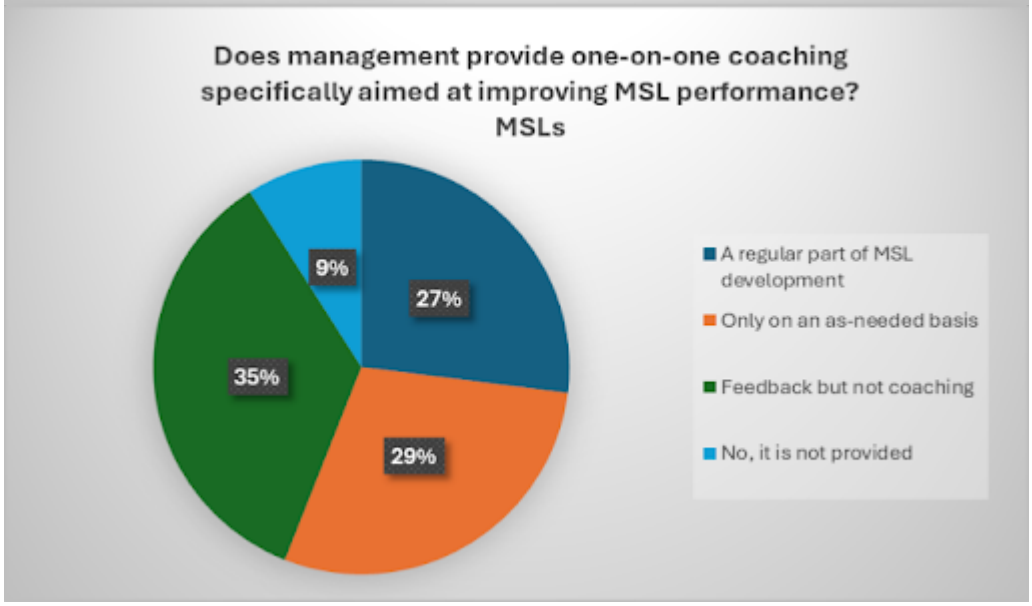
Figure 3. Differences of opinion between MSLs and managers as to whether the company measures the impact of the MSL.



Both positions found difficulty in measuring MSL performance and both proposed similar ideas such as a “higher development opportunity and enhanced communication and feedback loops” could be a way as indicators of the achievement of MSL aims in line with company goals, although in the case of managers, the “implementation of technology to improve performance” obtained a higher percentage.

Finally, there were mixed responses regarding whether the manager offers one-on-one coaching to improve MSL performance. A total of 35% of MSLs believed they did receive feedback but not coaching, while 58% of managers believed coaching was a regular part of MSL development. (**Figure 4)**

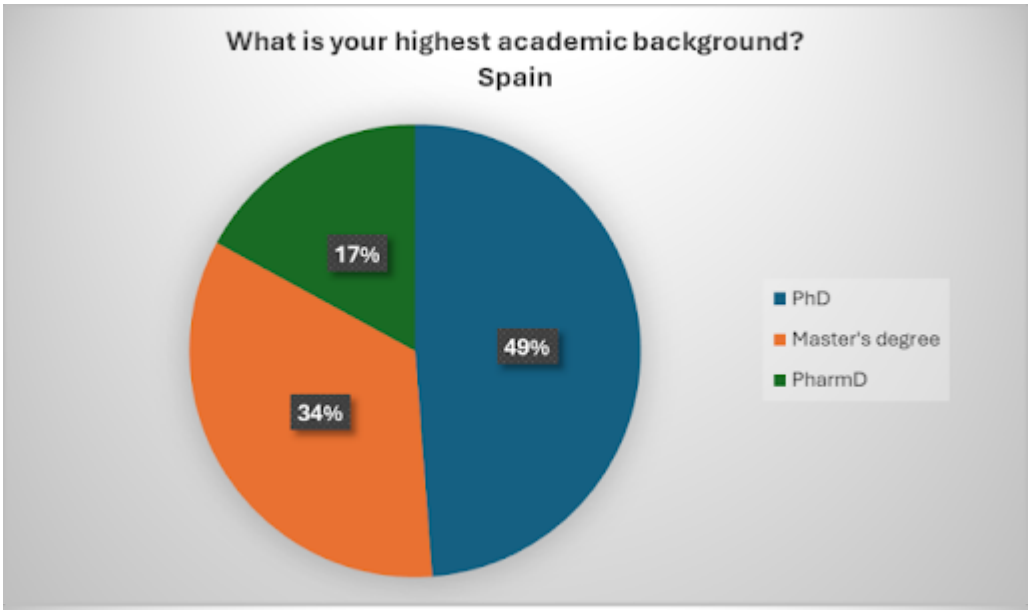


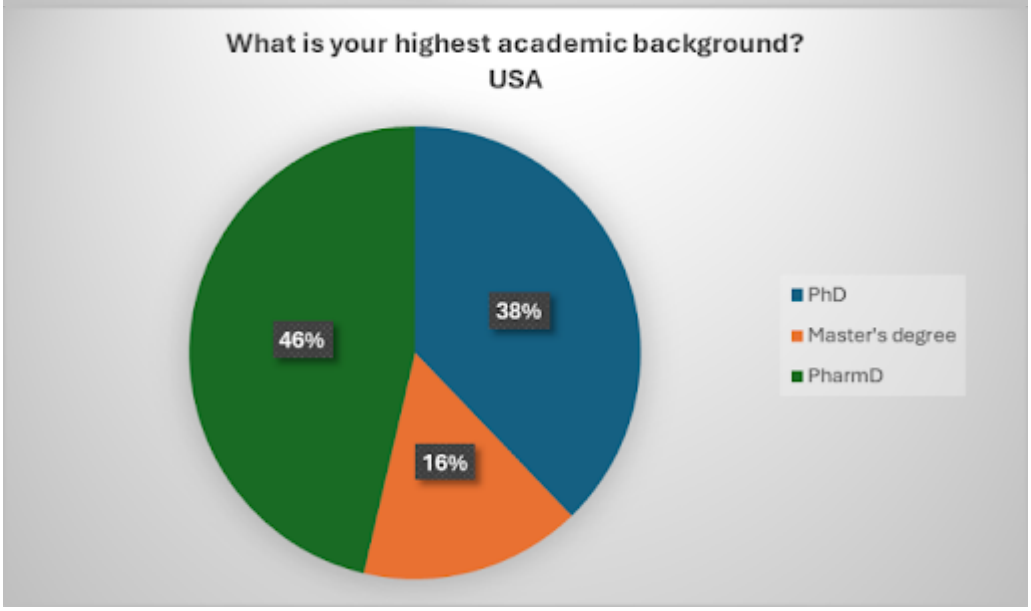


Spain vs USA comparison

When USA and Spain reports were compared, certain differences were also found. While in Spain, the majority (42%) work for a large pharmaceutical company, in the USA, there is more balance between working for large, medium-sized, and small pharmaceutical companies. Furthermore, when we compared both countries, in Spain, a higher percentage (40%) hold a PhD, and 28% hold a master's degree, while in the USA, 38% hold a PharmD, 31% hold a PhD, and only 13% hold a master's degree.

Figure 5. Differences between Spain and the USA according to the highest academic background achieved.





Regarding the weight given to different metrics, 70% of MSLs in Spain believe the qualitative metrics should be used. However, in the US, 55% believe qualitative metrics should be used, but 39% believe there should be an equal balance between the two.

There were also differences in the quantitative measures currently used. Both countries agree, with a majority percentage, that the most commonly used measure is the number of KOL engagements. However, in Spain, 60% believe that the number of scientific presentations delivered is a common measure. In contrast, in the USA, 52% believe it is the number of actionable insights submitted, and the same percentage believes it is the number of KOL relationships maintained.

Regarding the quantitative measures that should be used in the USA, they coincide with those used, while in Spain, 72% believe that the number of KOL engagements is followed by 60% the number of scientific presentations delivered, and 60% the number of internal projects.

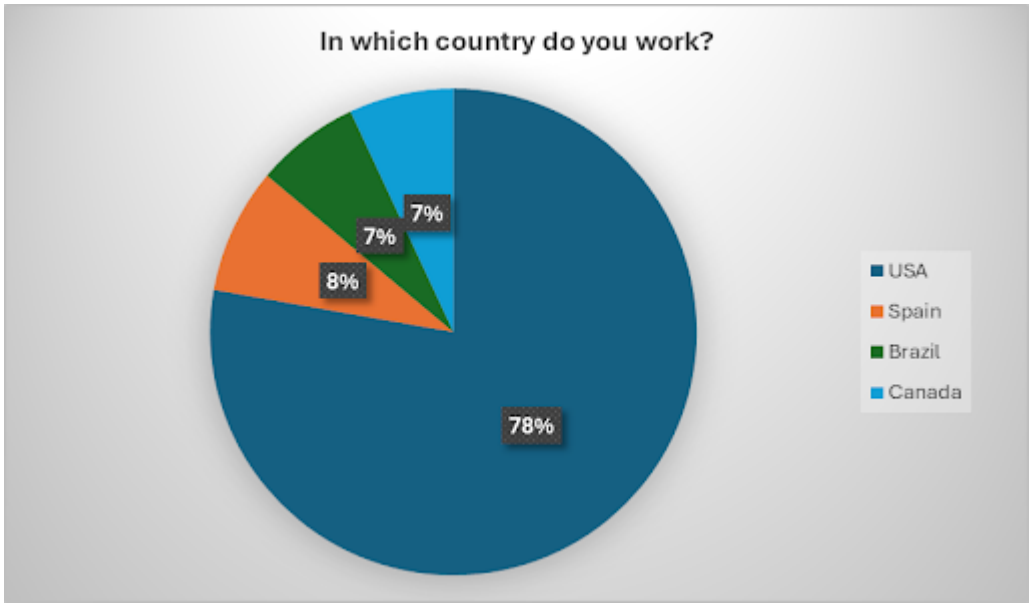
Regarding qualitative measures, both countries agree on the ones currently used. However, regarding those metrics that should be analyzed, in Spain, 70% believe in involvement in strategic planning, and 68% believe in actionable insights, involvement in medical strategy, and expanding KOL/HCP scientific knowledge. In the USA, 72% believe that “Quality of KOL/HCP relationships and/or engagements” should be used, followed by “Quality of Actionable Insights gathered” and “Feedback/observation from direct manager”.

Spain vs global comparison

When comparing Spain vs global data, we observed no significant differences in the therapeutic area in which they work. In terms of positions, there is a slightly higher percentage of MSLs in Spain compared to the global data.

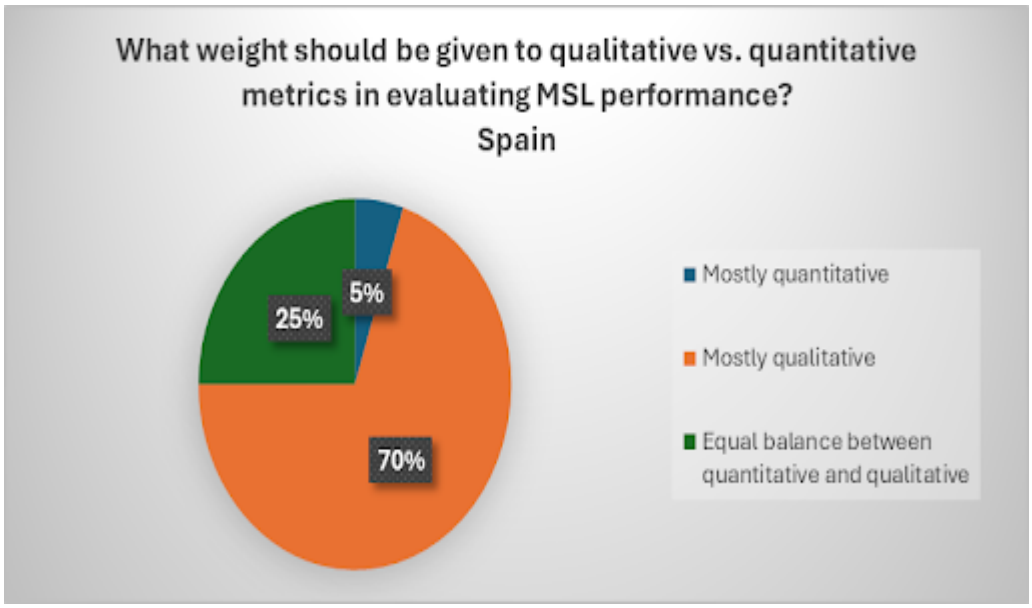
Spain appears to be the second most responsive country (6%) after the USA (56%), followed by Brazil and Canada with 5% each. It is observed that globally, only 18% carry 3 products, while in Spain, 23% would reach this number.

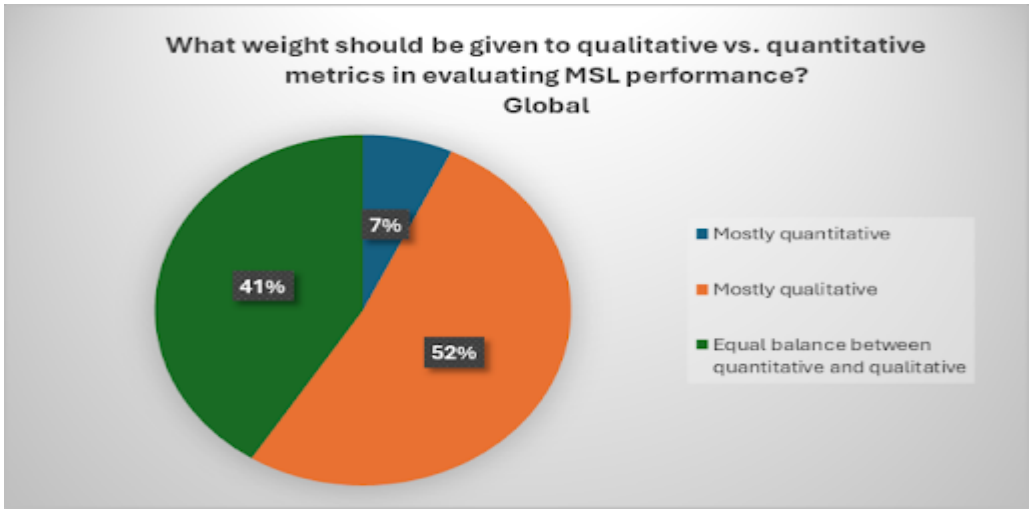
Figure 6. Countries with the highest percentage of answers.



When evaluating which metrics to use, 70% of respondents in Spain believe that qualitative metrics are the most suitable, while 25% believe there should be an equal balance between the two. However, at a global level, 52% believe that qualitative metrics are the most suitable, while 41% believe that a balance between qualitative and quantitative metrics should be used.

Figure 7. Differences of opinion regarding the metrics that should be used in Spain vs. the Global





Regarding the quantitative metrics currently used, both countries, with more than 90% of respondents, believe that it is the number of KOL engagement, however, in Spain, it is followed with 60% of scientific presentations delivered and with 44% respectively, the number of KOL relationship maintained and number of actionable insights. However, in the global case, the second most used quantitative metric would be the number of actionable insights (53%), followed by 51% of KOL relationships maintained and 49% of scientific presentations delivered.

When analyzing the quantitative metrics that should be used, among the highest percentages were: 64% the “number of KOL participation”, 63% the “number of actionable knowledge”, and 58% the “number of KOL relationships maintained”. On the contrary, in Spain, the highest percentage (72%), as in the global report, is the number of KOL engagements, but in contrast, 68% believe it should be the “number of scientific presentations made” and 60% the “number of internal stakeholder projects”.

Differences were also found in terms of the qualitative metrics most suitable to use. In the global report, 70% should be “Quality of KOL/HCP relationships and/or engagements,” 67% the quality of actionable insights, and 63% “Expanding KOL/HCP scientific knowledge of disease.” While for Spain, 70% should be “involvement in strategic planning” and 68% “involvement/contribution to medical strategy” and “quality of Actionable Insights gathered”.

Table 2. Differences between Spain and globally, according to the qualitative metrics that should be used (the highest percentage of responses).

Global	Spain
70% “Quality of KOL/HCP relationships and/or engagements”	**70%** “Involvement in strategic planning”
67% “Quality of Actionable Insights gathered”	**68%** “Quality of Actionable Insights gathered”
63% “Expanding KOL/HCP scientific knowledge of disease state, product, TA, etc.”	**68%** “Involvement/contribution to medical strategy” and “Expanding KOL/HCP scientific knowledge of disease state, product, TA, etc.”

DISCUSSION

The results showed similar answers across many parameters and certain differences as well. When comparing MSL positions and managers, the most significant differences lie in using quantitative or qualitative metrics, using the KOL Engagement Score, whether and how the value of MSL is defined, and the manager’s use of coaching. Regarding global and USA comparisons, the most notable differences are the academic level of the professionals, whether the organization accurately measures the impact of MSL, or whether KOL feedback is used as a metric.

This demonstrates that, for MSL positions, qualitative metrics are the predominant approach, despite being more subjective and non-quantifiable. However, in management positions, a balance between the two would be the chosen option. This may also explain the higher percentage of managers using the KOL Engagement Impact Score. Regarding other aspects, such as coaching, improvements in strategies that adequately assess MSL performance differ between the two positions. While individual

coaching is a good strategy to improve MSL development, according to MSLs, managers' feedback is the only approach carried out in most cases, contrary to the opinions of managers. This may vary depending on the way each company operates, and implementing it may not always be feasible. Thus, feedback is what is prioritized.

Comparing global and USA reports, the academic degree could show the differences in academic requirements established in each country. It is especially noteworthy that in the USA, there is a higher percentage of PharmD and a lower percentage of master's degrees compared to the USA.

The recently published article by Dyer et al. [4] was one of the first indexed articles and the first major global survey conducted to assess these aspects. Its objective was to evaluate the current and perceived use of quantitative and qualitative metrics in MSL performance, which generated the need for an evaluation system that includes both metrics that adequately measure MSL performance.

The global report on which this study is based reiterates the need for a re-evaluation of the methods used to measure MSL performance. Despite the differences of opinion among positions, one thing is clear: the need to establish qualitative metrics alongside quantitative ones and achieve a balance between them without losing the reliability of the evaluation methods. The objective is none other than to limit performance evaluation to a quantifiable measure, but also to combine the impact of the MSL activities in achieving the company's overall objective. A more strategic view of the impact of MSL could be provided using goal-oriented metrics, as Dyer described [5].

Currently, field medical teams are already adopting new strategies for qualitative KPIs [2]. Furthermore, the rise of new technologies and the emergence of artificial intelligence (AI), which has also brought about a change in the sector, with several applications in both resource optimization and innovation, could also be an effective tool to help in the performance of the MSL and maybe in the metrics used for its evaluation. In addition to these advances, other examples of emerging qualitative KPIs are medical insights, KOL sources, or surveying [2], as the two reports we have evaluated in this study have also been analyzed.

As a limitation, given the fact that the USA is the country with the highest number of answers, this could bias the results.

CONCLUSION

Despite the actual differences between positions within the Department of Medical Affairs and between global and USA that must be considered, there are also many similarities between them. This study also reiterates the need to re-evaluate the metrics used by prioritizing the use of qualitative metrics in combination with quantitative ones with the aim of having an overall view of the MSL impact.

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Orchestrating Influence: Mastering Omnichannel Engagement in the Era of the Digital Opinion Leader

By Mahmoud Saleh, PharmB | Summer 2025

Introduction

For decades, Medical Affairs operated within a structured hierarchy, where Key Opinion Leaders (KOLs) were identified through their academic contributions and conference presence. Engagement was largely confined to in-person interactions, reinforcing a top-down model of influence. However, the digital revolution has disrupted this paradigm, flattening traditional hierarchies and transforming scientific discourse into a dynamic, networked exchange. In the rapidly evolving landscape of Medical Affairs, the traditional paradigm of Key Opinion Leader (KOL) engagement, once rooted in academic hierarchy and in-person interactions, has been irrevocably transformed. The digital revolution has not merely introduced new communication channels; it has fundamentally reshaped the very architecture of scientific discourse, demanding a deeper, more sophisticated approach from Medical Science Liaisons (MSLs).

This article delves into the strategic imperative of mastering omnichannel engagement in the era of the Digital Opinion Leader (DOL), offering insights for MSLs to not just adapt, but to lead this new frontier of scientific influence.

The Emergence of the DOL: Beyond Publication to Pervasive Influence

The rise of DOLs represents a profound shift in how scientific information is disseminated, contextualized, and debated. No longer is influence solely the domain of those with extensive publication records or prominent positions at major conferences. DOLs, leveraging platforms such as Twitter, LinkedIn, scientific blogging platforms, and specialized podcasts, have cultivated significant reach and impact by translating complex scientific data into accessible, real-time insights. Their authority stems not just from factual accuracy but from their ability to foster dynamic, interactive discussions that resonate with a broad, diverse audience.

Consider the ripple effect of a single, insightful tweet from a DOL that distills the essence of a complex clinical trial, or a meticulously crafted infographic that demystifies an intricate mechanism of action. These aren't merely supplemental communications; they are often the initial touchpoints through which clinicians, researchers, and even patients encounter and interpret novel scientific information. For MSLs, this necessitates a fundamental recalibration of their perception of influence. Ignoring the digital sphere is no longer a passive oversight; it constitutes a critical strategic blind spot, hindering the ability to understand real-world sentiment, identify emerging data gaps, and anticipate critical clinical inquiries. The conversations happening in these digital ecosystems are not "noise" but a rich tapestry of unmet needs and evolving understanding.

From Multichannel to Omnichannel: The Strategic Imperative of Seamless Scientific Orchestration

The limitations of a siloed multichannel approach have become glaringly apparent in the age of the DOL. Dispersing content across disparate platforms—email, virtual meetings, in-person visits, social media—without ensuring a coherent, continuous dialogue results in fragmented engagement and diminished impact. Omnichannel engagement, by contrast, is a sophisticated orchestration of scientific dialogue, designed to create a seamless, *leader-centric* experience.

This isn't merely about using multiple channels; it's about intelligently integrating them to build upon each interaction. Imagine an MSL observing a DOL's nuanced tweet questioning the practical application of new clinical trial data. An effective omnichannel strategy would involve a compliant, value-added response directly within the DOL's digital ecosystem, followed by a transition to a private, virtual discussion to delve deeper into their concerns. Subsequently, these insights could be strategically integrated into a face-to-face meeting with a traditional KOL, fostering a synergistic exchange where the DOL's real-world questions inform the KOL's research agenda, and the KOL's insights enrich the DOL's digital discourse. This interconnected approach ensures a continuous, value-driven conversation, moving beyond mere information delivery to true scientific partnership.

Integrating DOLs into a Compliant Omnichannel Framework: Agility, Authenticity, and Ethical Rigor

Effective engagement with DOLs demands a nuanced approach that prioritizes agility, authenticity, and unwavering adherence to compliance standards. The foundational step is robust identification and meticulous listening. This extends beyond simple keyword searches; it necessitates the sophisticated deployment of social listening tools and network analysis to pinpoint

influential voices based on the *quality* of their discourse, the depth of their peer engagement, and the relevance of their content to specific therapeutic areas.

Crucially, value must be provided *natively* within the DOL's established digital ecosystems. Rather than attempting to redirect DOLs to preferred, company-controlled channels, MSLs must embrace engagement within the platforms where DOLs already operate and exert influence. This means offering relevant data, connecting them with other experts, and facilitating meaningful scientific discussions in a manner that respects their established digital presence.

Compliance, far from being an impediment, is the bedrock of credible digital engagement. Medical Affairs must proactively develop clear internal guidelines addressing fair market value for any direct engagement, transparent disclosure policies, and a rigorous separation of scientific exchange from any perception of commercial messaging. Internal frameworks must evolve to accommodate the dynamic nature of these new interaction models, ensuring that digital engagement is both impactful and ethically sound. The ultimate goal is to cultivate a synergistic relationship where the questions and insights generated by DOLs inform and are informed by the research agendas of traditional KOLs, with the MSL serving as the critical intellectual node connecting and enriching these diverse conversations.

Cognitive Load and the Architecture of Engagement

The proliferation of digital information presents a significant challenge: cognitive overload. The sheer volume of digital interactions can overwhelm stakeholders, diminishing the efficacy of engagement. MSLs, in this new era, must embrace the role of "cognitive architects," meticulously structuring information to optimize accessibility, relevance, and retention.

Insights from behavioral economics and communication psychology offer invaluable frameworks for designing engagement strategies that align with human cognitive processing capacities. This involves breaking down complex information into digestible segments, utilizing visual aids effectively, and employing clear, concise language. By reframing interactions not as transactional exchanges of data but as guided cognitive journeys, MSLs can significantly enhance comprehension, facilitate deeper understanding, and amplify the lasting impact of their scientific exchanges.

The Ethics of Digital Influence in Medical Science: Navigating the Nuances

The digitalization of medical discourse introduces a complex ethical landscape, particularly concerning scientific integrity, the pervasive threat of misinformation, and inherent biases. As scientific engagement increasingly transpires on public platforms, the delicate line between evidence-based communication and social influence can blur.

Ethical omnichannel strategies must be built upon pillars of uncompromising transparency, intellectual humility, and proactive misinformation mitigation. This requires MSLs to be adept at critically evaluating digital sources, correcting inaccuracies with evidence-based information, and fostering an environment of open, honest scientific debate. Furthermore, a deeper understanding of *medical epistemology* – the study of how digital platforms shape scientific understanding and knowledge acquisition – is critical. This provides essential insights into maintaining credibility, countering pseudoscientific claims, and ensuring that digital engagement upholds the highest standards of scientific rigor.

Future-Proofing the MSL Role: Architects of Tomorrow's Scientific Dialogue

The MSL role is not merely about adapting to current digital trends; it is about anticipating and shaping the next phase of digital transformation. The integration of AI-assisted engagement models, leveraging machine learning for sophisticated sentiment analysis, predictive analytics to identify emerging trends, and personalized content delivery, will fundamentally redefine scientific communication. Blockchain-based verification systems hold the potential to further enhance the credibility and authenticity of shared medical insights, building unprecedented trust in digital interactions.

By proactively embracing these technological innovations, MSLs can transcend their traditional functions and position themselves as true architects of the future scientific dialogue. This forward-looking approach ensures sustained relevance in an ever-evolving landscape, enabling MSLs to continue to be indispensable drivers of scientific progress.

Conclusion: The MSL as the Conductor of Modern Scientific Exchange

The future of Medical Affairs is not solely about knowledge dissemination; it is about the masterful orchestration of scientific dialogue. The emergence of DOLs is not a disruptive force to be contained, but rather a profound expansion of influence, adding rich new dimensions to the symphony of medical engagement. By truly mastering omnichannel strategies, MSLs can transcend isolated, transactional interactions and cultivate harmonized, deeply leader-centric experiences. This strategic evolution will empower MSLs to profoundly and lastingly shape the scientific narrative, solidifying their indispensable role as conductors of

modern scientific exchange and accelerating the pace of medical innovation.

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Mahmoud obtained a bachelor’s degree in pharmacy (Class of 2022) from Deraya University in Egypt. He serves as a Registered Pharmacist at the Ministry of Health and Population in Egypt, and currently works as a Medical Representative at STADA Emerging Markets. Dr. Mahmoud Saleh is a rising voice in Medical Affairs, blending front-line pharmaceutical experience with thought leadership in digital scientific engagement. From his early roles as a sales intern at leading healthcare firms, including Merck, Sandoz, and EVA Pharma, to his impactful tenure as a Product Specialist at Utopia Pharmaceuticals and Field Interviewer at Ipsos, Dr. Saleh has steadily built a career grounded in empathy, precision, and strategic insight.

Dr. Saleh’s advocacy for omnichannel engagement and his emphasis on ethically elevating Digital Opinion Leaders reflect his broader vision: a medical affairs ecosystem driven not just by data, but by accessible insight, strategic empathy, and authentic collaboration. Whether through published research, scientific journalism, or everyday stakeholder interactions, he is steadily composing a future where scientific influence is harmonized, transparent, and deeply human.

Professional Development for MSLs in the Middle East

By Zeinab Khaled Mohamed Awad | Summer 2025

Pursuing an MSL career is an adventurous job, a daunting journey around the world, which is why it is not easy for many to kick off their first MSL job. For anyone who wants to start their career, they get much advice and recommendations about MSL courses, workshops, or even webinars to understand the core value of the MSL role, but they forget to tell that it is not only about understanding the job description and doing its technicalities professionally. Haunting MSL role is beyond all of these.

The best possible description of this journey is to balance the dilemma between the known and the unknown. The known part is about getting skilled either technically or working on the personality. And the unknown part is most likely related to innovation and industry challenges.

To make this balance happen, the aspiring MSL needs to realize the importance of the role, first by educating themselves about this role and understanding the diverse responsibilities of the MSL. This happens when we learn about the MSL basics at least three times from different mentors around the world. The more they learn and digest the basics, the more they realize that there is no perfect workbook for this job since there is an external multifactorial environment other than their internal environment, which will prepare them well.

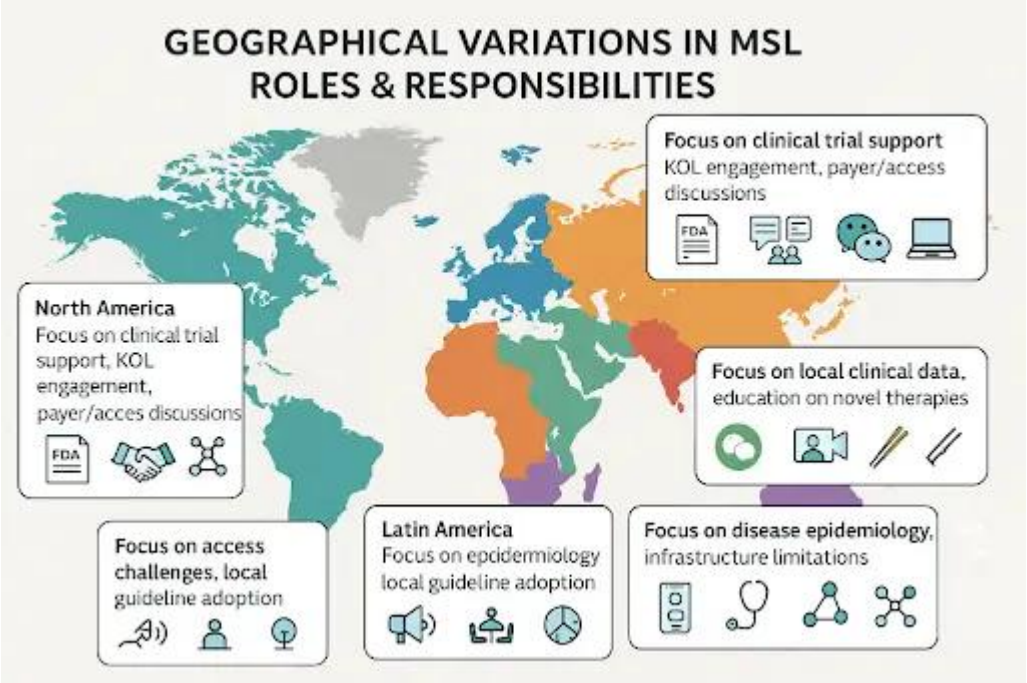
This external environment could be divided into 3 sections:

1. The geographical area and market type
2. Therapy area
3. MSL career ladder

Understanding these sections would play a pivotal role in determining what is the strategy to make your career path in the medical affairs field. To illustrate more about these sections, we would apply them to the Middle East region.

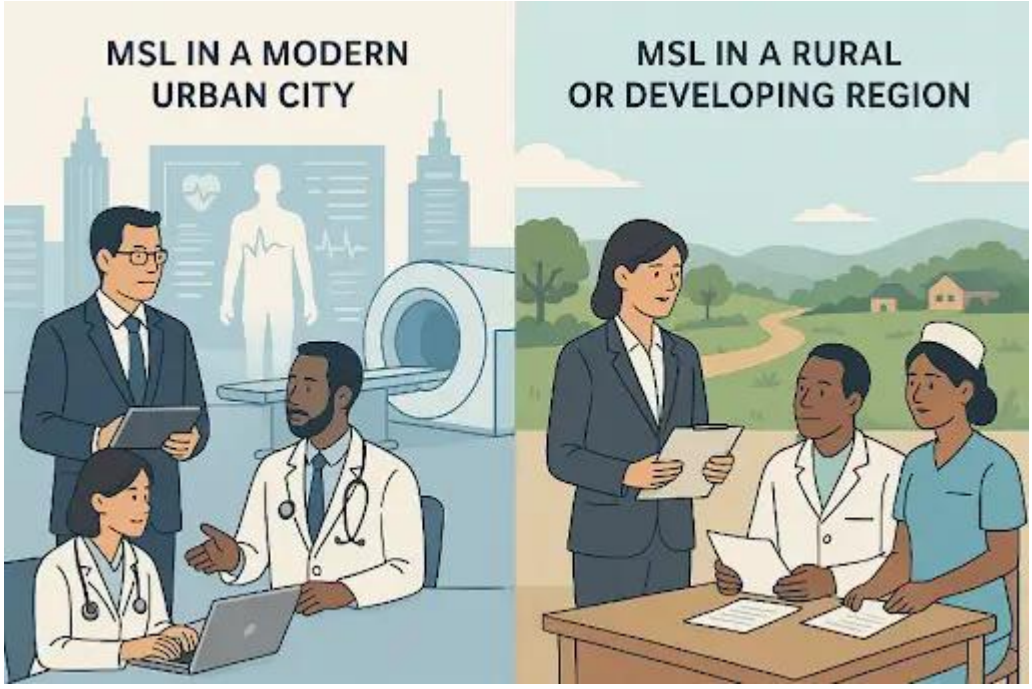
The Middle East as a region is an interesting market with a specific geographical area in the world. The geographical area is known for its central location, diverse population, rich market, and geopolitical incidents, besides economic variation between the countries in this region. The Middle East is considered a consumer market type more than an innovative one.

The second section is related to the therapy area, which is related to the scientific technicality of the MSL role. And the last section is understanding the career path ladder of MSL in the specific region. In the Middle East, it is popular to be promoted from the sales team to the medical affairs team.



So, from the insights of the previous example, we could deduce the possible daunting job plan for the MSL role in the Middle East that the MSL aspirant could start their early career in sales and then show their scientific skills to be promoted to the medical affairs department. This could be the best and straightforward MSL career haunting in the Middle East. But who says that there is no other adventurous plan for MSL haunting in the Middle East?

Medical affairs skills are dependent more on individual skills, which include non-scientific technical skills such as KOL engagement, strategic management, leadership, communication skills, and presentation skills. This could be the missing puzzle that hinders the person from getting the MSL role. But this doesn't mean that it is impossible to get these skills or to try to find the gap in the market to get in. This could be done by having dedication and patience within a learning journey, besides growing your professional connections, who would be your career coaches later.



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Zeinab Khaled Awad is an Oncology Pharmacist at the Health Insurance Nasr City Cancer Center and a Research Assistant at the German University in Cairo (GUC), specializing in the synthesis of novel immunomodulatory anti-cancer agents. With a strong foundation in Medical Affairs and MSL technical skills (CPD UK-certified), she has fundamentals in KOL engagement, scientific communication, and clinical research since she is aspiring MSL role in her region.

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