The Landscape *of* CME Outcomes

Continuing Medical Education (CME) is a crucial element within health care. It provides development for providers in all walks of care delivery and helps them manage and improve practice in the continually evolving field of medicine.

Moving with the times, CME has evolved in terms of method delivery. The industry breadth has expanded, technology usage has increased, and the learner experience has been prioritized and improved. Additionally, data from the Accreditation Council for Continuing Medical Education (ACCME) has found that CME optionality and engagement is at an all-time high. In the past ten years, physician CME participation has increased 37% and non-physician participation (ie, nurses, physician assistants, non-healthcare professionals) has increased 90%.[1]

In the past 10 years, physician CME engagement has increased

37%

While this growth has provided more educational opportunities for health care providers, they are now inundated with options when choosing CME programs, calling for a need to collect and deliver meaningful outcomes data as a benchmarking and efficacy tool. Recent studies, however, have highlighted the challenges associated with the lack of standardization in CME outcomes.[2]

Vindico's perspective

"About five years ago Vindico recognized the shift towards **the need for more robust data collection in CME**. We now have an Outcomes Team of advanced-degree professionals who are dedicated to the collection, analysis, and reporting of data, allowing us to **continually enhance** our cycle of CME development and delivery."

Robert A. Esgro, Chief Operating Officer, Vindico Medical Education

Historically, the ACCME has relied on a Moore's taxonomy[3] to guide and standardize outcomes development across CME. Moore's taxonomy serves as a blueprint for CME providers to gauge improvement in competence, care delivery, and quality of care in three segments: **engagement, experience, and impact**. While Moore's framework provides a general measurement anchor for the CME industry as a whole, it has become insufficient as technology, choice, and best-practices expand.

Engagement

Traditional measures of engagement (eg, registration, attendance, certificates) are useful in CME outcomes, particularly when marketing education, yet it is essential to understand the audience at a deeper level to know if the right audience was educated. To this end, Vindico incorporates a series of questions throughout an educational activity to discern an individual's professional experience. By asking questions such as degree, specialty, and patients with a given condition seen over a period of time, we can elucidate whether the education reached qualified providers who manage patients with a given condition.

This is an important step in validating not only that people were educated, but that the education was clinically meaningful to the audience. With advances in technology, it is also now possible to track a learner's engagement during the educational presentation. Through this type of active learning, learners have more control over their educational experience, which can influence both the educational experience and its impact.[5]

Traditional Approach Historical guide for outcomes development, but lacks the ability to show true efficacy	*Vindico's Approach* Building on historical efforts to demonstrate meaningful outcomes collection
Level 1: Participation The number of physicians who participated in the education. **Level 2: Satisfaction** The degree to which expectations of participants were met. **Level 3: Learning** The degree that participants state newly earned knowledge. *Level 3a: Declarative Knowledge* *Level 3b: Procedural Knowledge* **Level 4: Competence** Participants are able to show or demonstrate new knowledge. **Level 5: Performance** Participants do what the CME intended them to do. **Level 6: Patient Health** Patient health changes as a result of action by participants. **Level 7: Community Health** Community health changes as a result of action by participants.	**Measure Engagement** Ensuring education is reaching qualified providers who manage patients with a given condition by asking targeted questions, such as degree, specialty, and patient reach. **Measure Experience** Developing qualitative and quantitative measures to collect experience data that transcends across providers and controls for potential biases by understanding providers' expectations prior to enrollment. **Measure Impact** Combining engagement, experience, and, if resources allow, additional data streams to determine if the education delivered changed providers' knowledge and/or practice patterns.

Experience

The second and third levels of Moore's taxonomy provide more insight into the ways in which participants understand and interact with CME content. The alignment of these two levels can provide meaningful insight into the participants' experience and how their initial expectations can potentially impact informational retention. A study assessing physician expectation of CME found that 43% of physicians felt the CME did not meet their expectations.[4] While it is important for organizations to ensure they're meeting the experiential needs of participants, it is equally as essential to collect experience data that transcends across providers and controls for potential biases.

43%

of physicians feel that continuing medical education does not meet their expectations.

One relevant tool that can be used to measure experience is the Net Promoter Score, or the NPS. This score is widely recognized as a validated tool to assess user satisfaction and likelihood to recommend the educational activity. Pairing a widely used tool like the NPS with quantifiable questions to assess experience provides meaningful insight for program assessment.

Asking the right questions to measure experience

Assessment questions to understand experience should be personalized to the program and the participants.	➤ Did this program allow you enough opportunity to interact with faculty? ➤ In this continuing education program, how much information was new to you? ➤ What percentage of this program would you say met your expectations?

Additionally, program developers should work to understand what is important to users before education is delivered, as well as after. For example, asking participants after the course if they felt the program allowed them enough time to interact with faculty can be made more meaningful if we know what amount of time they were expecting in the first place. By developing questions that take a more personalized approach, organizations can build on the enrollee profile coupled with information relating to their specific experience and expectations.

Impact

When assessing impact, there is one fundamental question needing to be answered: did this education change knowledge and/or practice patterns? The fourth level and above in Moore's Taxonomy assesses action-based outcomes, such as the ability to physically demonstrate understanding in a real-world setting. These levels create the link from educational engagement to experiential application and allow for the opportunity to determine which parameters and profiles are needed for education to effectively lead to action. Incorporating engagement and experience data supports impact assessment. For example, if participants report that 85% of program information wasn't new, the chances of the program creating a substantial impact is likely to be low. Therefore, if the experiential and engagement expectations of participants are understood and aligned, this opens up more opportunity to create lasting impact in practice and knowledge.

"At Vindico, outcomes are **at the forefront of every program design.** We carefully align format, content, marketing, and assessment to ensure that we deliver appropriate education to the right audience and collect meaningful information for robust impact."

Katie Robinson, PhD, CHCP, Associate Director, Medical Research and Quality Outcomes

When not cost- or time-prohibitive, additional data streams (eg, real-world data, electronic health records, claims data) can objectively assess the application of CME to practice. Additionally, when applicable, Vindico offers follow-up methods to more objectively measure practice changes.

Vindico's Approach to CME Outcomes Collection	
Expertise and Evidence	➤ Dedicated outcomes team of CME professionals with PhDs or other advanced degrees in mathematics ➤ Development of educational programs with precise alignment of content, format, and outcomes assessment
Ensured Intentionality	➤ Targeted marketing efforts to ensure the appropriate HCPs engage with the program ➤ Careful construction of pre-, intra-, and post-activity outcomes assessments to ensure collation of appropriate and necessary information
Extensive Analysis	➤ In-depth analysis of data with meaningful medical interpretation ➤ Reporting of outcomes in tangible formats to key stakeholders ➤ Presenting select analyses at clinical or industry outlets

A Continued Need for Accessible Solutions to Effectively Collect Accurate Outcomes Metrics

As the market expands and shifts, the need for consistent and reliable metrics collection will continue to stay a priority. On the whole, focusing on understanding and aligning engagement, experience, and impact data will likely drive more meaningful data. Understanding what participants want versus deciding what they need prevents unmet expectations and experiences.

On the whole, the industry is discovering a wide spectrum of methods to collect engagement, experience, and impact data with the overarching goal of collaboration in the improvement of provider practice and care delivery. As CME opportunities evolve and the need for consistent, reliable benchmarking data expands, it is essential that CME providers continue to move towards innovation among content delivery and metrics collection.

What we Know

UNDERSTANDING WHAT PARTICIPANTS WANT

versus

DECIDING WHAT THEY NEED

provides

A POSITIVE EXPERIENCE CONDUCIVE TO LEARNING

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Acknowledgments