Session Report

**Being Our Own Worst Critic: Using critical thinking skills to strengthen medical communication**

**Speaker**

**Dr. Andrea Clark, PhD**

*Aroga Biosciences*

By Kylie VanDerMolen

*On May 16th, 2025, Dr. Andrea Clark, PhD gave an informative presentation on leveraging our critical thinking skills to ensure our medical writing maximizes clarity, accuracy, and impact. Dr. Clark is a manager of regulatory medical writing at Aroga Biosciences and is the AMWA-Mid Atlantic Chapter (MAC) Regional Event Coordinator for Southern Virginia.*

Dr. Clark’s session highlighted that critical thinking should be applied throughout the medical writing process, including clinical study design, literature review, and consideration of factors like language and grammar, interpretation and presentation of data, and audience. She called medical writers to move beyond simply reporting information and instead evaluate and interpret it. Writers were encouraged to assess data quality and limitations, distinguish evidence from opinion, and prioritize clear and consistent messaging. She stressed that poor critical thinking can lead to serious consequences, including patient harm, regulatory rejection, and loss of trust. The infamous fraudulent 1998 *Lancet* study linking the MMR vaccine to autism was cited as a stark example of misleading science that sparked lasting fear beyond its retraction.  
  
 Dr. Clark gave practical tips on language and grammar, emphasizing that even small errors can erode credibility. She mentioned grammatical pitfalls like dangling and misplaced modifiers, poor sentence structure, and improper comparative structure. She also noted that ambiguous phrasing, dosing errors (e.g. mg versus mcg), and easily overlooked spelling errors (e.g., “trail” instead of “trial”) can compromise clarity and confuse the reader. Ensuring consistency in abbreviations, terminology, and formatting was stressed as vital for document accuracy and professionalism.

Critical data review was highlighted, and writers were urged to go beyond restating results. Effective review includes evaluating each endpoint individually, interpreting statistical outputs and clinical relevance, considering alternative explanations, and comparing findings across studies. Writers were encouraged to remain objective and logical, contextualize results, and acknowledge limitations. She emphasized that even if a client asks to cherry-pick data, writers should engage the client in reviewing all evidence and align on ethical, data-driven conclusions. She also urged writers to be precise in their language usage and to avoid overstating results. A key point was using the term *“significant”* carefully, as statistical significance does not always imply clinical importance, and vice versa. Overall, grounding interpretations in evidence and context ensures our medical writing is both accurate and meaningful.

Strategies for strengthening content included establishing robust quality control processes, collaborating across cross-functional teams, and alignment with style guides and regulatory requirements. Planning scenarios, acknowledging diverse perspectives, and managing realistic timelines were presented as tools to enhance problem-solving and reduce errors. Dr. Clark especially emphasized the value of critically reviewing your own work rather than relying on quality control alone. Writers were encouraged to organize their writing by using checklists, templates, and document management systems.

Overall, the session stressed that critical thinking is not a single step in the writing process—it is a continuous mindset. By prioritizing critical thinking, medical writers can enhance problem solving, ensure compliance, quality, and accuracy, and ultimately contribute to improved patient care and trust in scientific information.

*Acknowledgements and Disclosures:*

*Thank you to Diana Henzel for her careful review and editing on this report.*

*AI Disclosure: AI (ChatGPT, model GPT-4o) was used for an initial draft of this report based on notes written by the author. Content was thoroughly edited and reviewed by author and editor to ensure accuracy and clarity.*