

Duke Margolis-FDA Workshop: Advancing Premarket Safety Analytics

Virtual Public Workshop

September 14, 2022, 12:00–5:00 p.m. ET

Discussion Guide

Due to a lack of standardization for premarket safety data analysis and visualization in regulatory applications, inconsistencies in adverse event definitions, categorizations, analyses, and presentations have been noted. This variability can make it more difficult to detect safety signals. To better detect safety signals in the premarket setting, the U.S. Food and Drug Administration (FDA) Office of New Drugs Biomedical Informatics Team led the development of two documents in collaboration with the FDA Medical Queries (FMQ) working group as well as the Standard Safety Tables and Figures working group to facilitate review of safety data.

- The first document, the FDA Medical Queries, are a standardized approach to group Preferred Terms.
- The second document, the Standard Safety Tables and Figures Integrated Guide, contains standardized methods for visualization of clinical trial safety data into tables and figures.

The agency values transparency and collaboration with external stakeholders—therefore both documents have been made available for public comment through an [FDA-created docket](#).

The Robert J. Margolis, MD, Center for Health Policy at Duke University, under a cooperative agreement with FDA, is hosting a workshop where FDA will present their enhanced work and perspective on premarket review of safety data. The FDA documents will serve as a launch point for broader conversations on best practices and innovative approaches for advancing premarket safety signal analytics. This workshop provides an opportunity for interdisciplinary collaboration to enhance adverse event grouping and safety analyses visualizations. Stakeholders will outline strategies for adverse event grouping to identify safety signals in clinical trial data. There will also be discussion on enhanced methods for visualizing and analyzing adverse event and laboratory data. This workshop will cover the following:

- Presentations from FDA to unveil their outlook and processes for grouping of adverse events in clinical trial safety data and for displaying clinical trial safety data in tables and figures
- Considerations for including grouped terms (e.g., FMQs) and their component terms in prescription drug labeling
- Advanced methods to improve signal detection by using algorithmic FMQs that utilize laboratory, medical history and concomitant medication data in addition to the adverse event data
- Discussions among stakeholders leading the development of strategies for advancing safety analytics

Stakeholder Perspectives Exploring Premarket Adverse Event Grouping

Panelists will review clinical safety signal evaluation from a broad range of clinical areas and therapeutics. Discussion will focus on best practices and emerging technologies to identify and categorize Preferred Terms. In addition, the panel will discuss how approaches to grouping safety events, including FMQs, may be included in prescription drug labeling.

Discussion Questions

1. Does your institution group adverse events? If so, what criteria do you use? What is the process of implementation and validation? What other challenges, successes, and lessons learned have you encountered?
2. What issues have you faced when including group and component terms in labeling?
3. What new approaches can help enhance querying of adverse events in clinical trials—especially when PTs alone are not adequate?
4. What other methods exist to identify and characterize safety signals using adverse event datasets?

Examining Strategies for Adverse Event Analysis

Panelists will present their perspectives on adverse event and laboratory data analyses—including innovative approaches presentation of clinical safety data into tables and figures. Discussion will build on key standard and expanded safety topics introduced in the Standard Safety Tables and Figures Integrated Guide (IG) presentation. Furthermore, the panel will consider how the IG may affect premarket submission of safety data.

Discussion Questions

1. What are the strengths of the Integrated Guide and how can the Integrated Guide be improved?
2. What promising practices exist for presenting safety data into tables and figures? How are these practices implemented and validated? What are the major obstacles to overcome?
3. What are your thoughts on the definition of treatment emergent adverse event presented by the FDA?
4. What new approaches or technologies or methods can help enhance identification of premarket safety signals in clinical trials?
5. What metadata elements and additional materials are needed to ensure reproducibility of safety graphics?

This workshop is supported by the Food and Drug Administration (FDA) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award (U19FD006602) totaling \$3,344,533 with 100 percent funded by FDA/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by FDA/HHS, or the U.S. Government.