

United States FDA Real-World Evidence Program

A Quick Tour

14 September 2023

8th EFSPi Regulatory Statistics Workshop

Session 5: Use of non-RCT studies in regulatory decision-making

Mark Levenson, Ph.D.

United States Food and Drug Administration

21st Century Cures Act of 2016



- FDA established a program to evaluate the potential use of real-world evidence (RWE) to:
 - Support a new indication for a drug approved under section 505(c)
 - Satisfy post-approval study requirements
- Standard for substantial evidence remains unchanged
- Draft framework issued in December 2018
- Prescription Drug User Fee Act (PDUFA) VI commitments
- Draft guidances for industry issued
- PDUFA VII Advancing RWE Initiative

Real-World Evidence — Where Are We Now?

John Concato, M.D., M.P.H., and Jacqueline Corrigan-Curay, J.D., M.D.



Randomized, Interventional Study

Nonrandomized, Interventional Study

Nonrandomized, Noninterventional Study

Traditional randomized trial using RWD in planning

Trial in clinical practice settings, with pragmatic elements

Externally controlled trial

Observational study

RWD used to assess enrollment criteria and trial feasibility
RWD used to support selection of trial sites

Selected outcomes identified using, e.g., health records data, claims data, or data from digital health technologies

RCT conducted using, e.g., electronic case report forms for health records data or claims data

Single-group trial with external control group derived from RWD

Cohort study
Case-control study
Case-crossover study

Generation of RWE

Increasing reliance on RWD

Reliance on RWD in Representative Types of Study Design.

RCT denotes randomized, controlled trial; RWD real-world data; and RWE real-world evidence.

N ENGL J MED 386;18 NEJM.ORG MAY 5, 2022

Status of FDA RWE Guidance – April 2023

Category	Topic	Status	Date
Data considerations	EHRs and claims data	draft published	Sep 2021
	Registry data	draft published	Nov 2021
Submission of data	Data standards	draft published	Oct 2021
Applicability of regulations	Regulatory considerations	final published	Aug 2023
Design considerations	Externally controlled trials	draft published	Feb 2023
	RCTs in clinical practice settings	<i>draft in development</i>	–
	Non-interventional studies	<i>draft in development</i>	–
Procedural	Submitting documents	final published	Sep 2022

Regulatory Considerations Guidance – Overview

- Discusses need (or lack of) for Investigational New Drug Application (IND) and other legal requirements for non-interventional studies
- Sponsors planning to use a non-interventional study to support a marketing application should engage with FDA early in the drug development process
- Sponsors should provide protocol/statistical analysis plan (SAP)
- Sponsors should document all analyses performed on the data during the study, including feasibility evaluations/exploratory analyses
- Sponsors must ensure that they are able to submit patient-level data in a marketing application when required
- Studying monitoring, data traceability, and safety reporting addressed

Advancing RWE Program Overview

- New program announced publicly on October 20, 2022
- Fulfills an FDA commitment under PDUFA VII
- Provides sponsors who are selected into the program up to four meetings with the Agency to discuss the use of RWE
- Key design elements may be presented by FDA as case studies, including before the drug is approved by FDA for the proposed indication or the post-marketing study is completed
- Existing procedures for sponsors to engage with the Agency will continue to be available

Additional Resources

- Public Websites:
 - [Real-World Evidence | FDA](#) (General FDA RWE information)
 - [Advancing Real-World Evidence Program | FDA](#) (Pilot program information)
- Questions can be directed to:
 - CDERMedicalPolicy-RealWorldEvidence@fda.hhs.gov

Thanks