Real-World Evidence Generation: Advancing Regulatory Science and Patient Access for IVDs

Public Comment Period

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May 28, 2020
Welcome

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MDIC is a 501(c)(3) non-profit organization and is the first-ever public-private partnership created with the sole objective of advancing regulatory science of medical devices for patient benefit.
MDIC PROGRAM INITIATIVES

- Regulatory Science
- Clinical Dx
- Clinical Trial Sciences
- Science of Patient Input
- Case for Quality
- Computer Modeling & Simulation
- NEST Coordinating Center
- Health Economics & Patient Access
- Cybersecurity

Learn more at: www.MDIC.org
Clinical Diagnostic Projects

- SHIELD: Systematic Harmonization and Interoperability Enhancement for Lab Data
  - Partnership with OIR

- Somatic Reference Samples
  - Project – Launched June ’18 (Dx Validation Tool)

- IVD EUA RWE Workshop
  - Feb 3, 2020

- Surrogate Sample Framework

- Fingerstick Blueprint

- Clinical Evidence Tools

- IVD RWE Framework

- Clinical Evidence Framework

* Regulatory Science tools on www.mdic.org
IVD RWE Project

Danelle Miller, JD | VP Global Regulatory Policy and Intelligence, Roche Diagnostics | MDIC IVD RWE Working Group Chair
Scope of the Framework

This Framework identifies:

1. The current RWD and RWE Landscape
2. Potential applications of RWE in support of IVD pre-market regulatory decision making
3. Potential applications of RWD in support of IVD post-market issues
4. A proposed approach to evaluate relevance and reliability of RWD to assess data quality for IVD regulatory decisions
5. Study designs and methods to generate valid scientific RWE for IVD regulatory assessment
Process used to develop framework

Sub-teams were established to conduct the following:

- Initiate a Glossary of terms
- Landscape analysis to survey IVD manufacturers to assess prior/current use of RWE across the total product lifecycle
- Literature search for IVD RWD/RWE use
- Describe data quality and methods for using IVD RWD
Working Group Members

**Industry:**
- Sharon Hensley Alford, PhD
- Sharita Brooks
- Mayank Choudhary, MS
- Susan H. Gawel, MS, PhD
- John Hornberger, MD, PhD
- Asif Jan, PhD
- Ani John, PhD
- Diane Johnson, MS
- Doug Malinowski, PhD
- Lesley Maloney, PharmD
- Danelle Miller, JD, (Working Group Chair)
- Tyler O’Neill, DVM, MSc, PhD
- Bill Row, MBA, MS
- Janine Spafford, MA
- Brad Spring
- David Stivers, PhD
- Kelli Tanzella, PhD
- Jeff Zinza
- Jing Zhang, PhD

**Government:**
- Andrea Bell-Vlasov, PhD
- Sara Brenner, MD
- Toby Lowe
- Marina Kondratovich, PhD
- Wendy Rubinstein, MD, PhD
- Michael Waters, PhD

**Expert Advisors:**
- Susan Alpert, MD, PhD
- B. Melina Cimler, PhD
- Alberto Gutierrez, PhD

**MDIC:**
- Carolyn Hiller, MBA, Program Director, Clinical Diagnostics

**Organizations:**
- Abbott
- BD
- CDC
- FDA | CDRH
- Genomic Health
- Hologic
- IBM Watson
- ICON, plc
- Johnson & Johnson
- Roche Diagnostics
- Sysmex America
- Thermo Fisher Scientific

**Acknowledgements:**
We appreciate the input from individuals that helped to create this framework:
- Adam C. Berger, PhD
- Hope Knuckles, MS
- Thomas H. Taylor Jr., PhD
IVD RWE and CDRH

Wendy Rubinstein, MD, PhD Director Personalized Medicine
FDA | CDRH | OHT7:OIR
Highlights from the Framework

Tyler O’Neill, DVM, MSc, PhD | Clinical Science Leader | Medical & Scientific Affairs | Roche Diagnostics | MDIC Working Group Member
Contains Nonbinding Recommendations

Use of Real-World Evidence to Support Regulatory Decision-Making for Medical Devices

Guidance for Industry and Food and Drug Administration Staff


The draft of this document was issued on July 27, 2016

For questions about this document regarding CDRH-regulated devices, contact the Office of Surveillance and Biometrics (OSB) at 301-596-5997 or CDRH/ClincalEvidence@fda.hhs.gov.
For questions about this document regarding CBER-regulated devices, contact the Office of Communication, Outreach, and Development (OCOD) at 1-800-835-4709 or 240-402-8010.

U.S. Department of Health and Human Services
Food and Drug Administration

Center for Devices and Radiological Health
Center for Biologics Evaluation and Research
In most instances, RWD are not generated for the explicit purpose of research.

Framework provides detail on limitations including:
• Inaccurate recording of health or disease events
• Systematic biases
• Missing data or variables of interest, including unique device identifiers
• Insufficient clinical details or temporal uncertainty about the specific IVD
• Opaque reporting of data collection and management, including an inability to establish data provenance in evaluation of data quality
Evidentiary requirements continue to be risk-based, regardless of origin of evidence.

RWE can be source or supplement to reasonable assurance of IVD safety and effectiveness.

Framework highlights value of RWD across the total product lifecycle.
RWD for Clinical Performance Studies (examples)

Observational Clinical Performance Study

Non-observational Clinical Performance Study

Virtual Clinical Performance Study

RWD for Establishing Cut Points (examples)

Scheme for RWD aid in diagnosis and follow-up

RWD for an AI system as a binary test

Virtual clinical study for an AI system as a test with three categories
Process to Provide Comments
Questions for Public Comment Period

1. Are there any statements that you disagree with? 
   *(Provide corresponding line number in Framework)*
2. How should the statement be written?
3. Rationale why?
4. References to support rationale.
5. Is anything missing?
Process for Access Framework & Providing Feedback

• ACCESS the draft Framework
  https://mdic.org/project/ivd-real-world-evidence/
• REVIEW the Framework
• SHARE your comments on above link

Public Comment Period Closes June 15, 2020
Questions for Panelists

Please type your questions in the Chat Box