# US FDA Update

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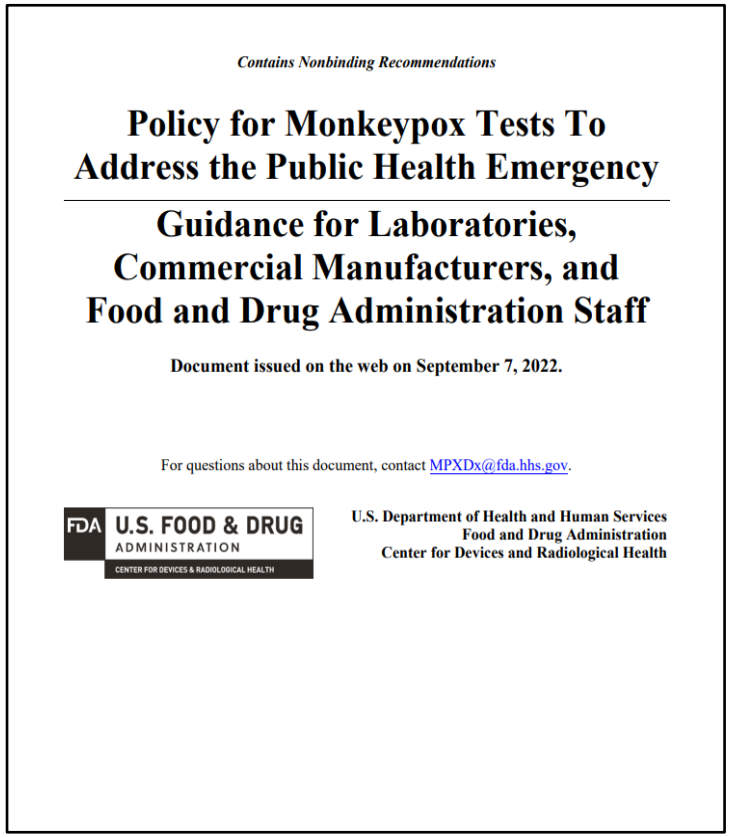
# Monkeypox Updates

# Monkeypox

- The DHHS Secretary declared a Public Health Emergency (PHE) in the U.S. for Monkeypox on 4 August 2022
- The Emergency Use Authorization (EUA) went into effect on 7 September 2022.
  - Also on this date, the FDA issued the first EUA for a monkeypox IVD, the Quest Diagnostics Monkeypox Virus Qualitative RT-PCR, which uses lesion swab specimens
- Prior to this:
  - 24 June 2022 - U.S. FDA cleared the CDC Non-variola Orthopoxvirus RT-PCR test for use at CDC and in CDC's public health Laboratory Response Network (LRN)
    - Test is now also available at five large commercial labs
    - Uses swab samples taken directly from a lesion

# Monkeypox

- A new guidance, *Policy for Monkeypox Tests to Address the Public Health Emergency*, was issued on 7 September 2022. This guidance:
  - Contains voluntary templates to help labs and commercial manufacturers rapidly expand the availability and accessibility of tests,
  - Describes FDA's review priorities of emergency use authorization (EUA) requests for monkeypox diagnostic tests,
  - Describes FDA's enforcement policies for certain diagnostic tests that are developed by and performed in a single-site laboratory certified under the Clinical Laboratory Improvement Amendments (CLIA) that meets the requirements to perform tests of high complexity,
  - Provides recommendations for diagnostic test validation,
  - Describes FDA's enforcement policies for FDA-cleared or authorized monkeypox diagnostic tests that are modified, and
  - Describes FDA's enforcement policies for certain serology tests.



*Contains Nonbinding Recommendations*

**Policy for Monkeypox Tests To Address the Public Health Emergency**

**Guidance for Laboratories, Commercial Manufacturers, and Food and Drug Administration Staff**

**Document issued on the web on September 7, 2022.**

For questions about this document, contact MPXDx@fda.hhs.gov.

FDA U.S. FOOD & DRUG ADMINISTRATION
CENTER FOR DEVICES & RADIOLOGICAL HEALTH

U.S. Department of Health and Human Services
Food and Drug Administration
Center for Devices and Radiological Health

# Medical Device User Fee Amendments Overview

# Medical Device User Fee Amendments (MDUFA)

- Program where industry pays user fees which the agency uses to increase review capacity to meet performance goals on review timelines and implement targeted process improvements.
- Helps assure patients have access to safe, effective, high-quality devices in a timely fashion and there is a clear, predictable path to market for new innovations.
- The user fees authorized by MDUFA are crucial to enabling CDRH to continue to modernize our regulatory programs.
- The program is reauthorized every five years based on new negotiated agreements and new legislation:
  - MDUFA I: FY 2003-2007
  - MDUFA II: FY 2008-2012
  - MDUFA III: FY 2013-2017
  - MDUFA IV: FY 2018-2022
  - **MDUFA V: FY 2023-2027**

# Themes of the MDUFA V Agreement

- **Review Performance |** Introducing a new goal structure with opportunities for "add-on" payments, as well as improving goals for PMA Total Time to Decision, 510(k) Total Time to Decision, Pre-Submissions, and De Novo decisions
- **Program Improvements |** Launching a TPLC Advisory Program Pilot, as well as enhancing programs to support patient science and engagement, real-world evidence, consensus standards, digital health, and ***international harmonization***
- **Hiring & Retention |** Providing resources and associated goals to enhance hiring and retention of world-class technical and scientific staff
- **Performance Accountability |** Supporting a high-quality program through regular audits by a quality management team and independent assessments
- **Financial Transparency |** Adding new accountability mechanisms and enhanced reporting

# MDUFA International Harmonization Goals

- There are **five broad commitments** related to international harmonization efforts:
  1. Expand engagement in international harmonization and convergence efforts through participation with international regulators and other key stakeholders in forums, working groups, projects, and committees
  2. Further support regulatory convergence by creating a mechanism for FDA to work with regulatory partners.
  3. Assess the extent of CDRH implementation of IMDRF technical documents and make this information publicly available.
  4. Support the creation of a forum to engage with relevant stakeholders to identify opportunities for regulators to leverage one another's approach to decision making.
  5. Participate in outreach activities to other regulatory authorities that encourage harmonization

- We have to issue a strategic plan with additional details and timelines associated with achieving these international harmonization objectives and publish an annual assessment of our international harmonization activities.

# Digital Health Updates

# Continuing our Collaborative Approach


Published AI/ML-SaMD Discussion Paper


First joined Collaborative Community related to AI/ML

WORKSHOP

Evolving Role of AI in Radiological Imaging

Public Workshop on AI/ML in Radiological Imaging


PEAC Mtg on Patient Trust in AI/ML Devices

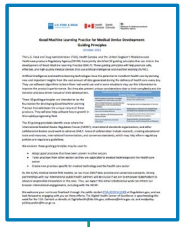

Published AI/ML Medical Device Software Action Plan

Posted List of Currently Marketed AI/ML Devices

WORKSHOP

Transparency of AI/ML-Enabled Medical Devices

Public Workshop on Transparency of AI/ML Devices



Published GMLP Guiding Principles

**2019** **2020** **2021**

**We recognize that by working collaboratively with stakeholders we can lay out a clear path toward building a proactive patient-centered approach to the development and use of AI/ML-enabled devices.**

# FDA held a Public Workshop on Transparency of AI/ML-enable Medical Devices on Oct 14, 2021.

- What are the needs of specific stakeholders?
- What is the appropriate information to communicate?
- What is the best way to communicate that information?
  - How can device labeling be improved?
  - How can other public-facing information be improved?
  - What else can be done to promote transparency?

**TRANSPARENCY: Degree to which appropriate information about the device** – *including its intended use, development, performance, and, when available, logic* – **is clearly communicated to stakeholders**

**Working definition of Transparency, above, for purposes of this workshop adapted from ISO/IEC JTC1 SC42 WG1 25059 (draft)*

# Good Machine Learning Practice Principles




**We envision these guiding principles may be used to:**

- Adopt good practices that have been proven in other sectors;
- Tailor practices from other sectors so they are applicable to medical technology and the health care sector; and
- Create new practices specific for medical technology and the health care sector.

| Good Machine Learning Practice for Medical Device Development: Guiding Principles | |
|---|---|
| **Multi-Disciplinary Expertise are Leveraged Throughout the Total Product Life Cycle** | **Good Software Engineering and Security Practices are Implemented** |
| **Clinical Study Participants and Data Sets are Representative of the Intended Population** | **Training Data Sets are Independent of Test Sets** |
| **Selected Reference Datasets are Based Upon Best Available Methods** | **Model Design is Tailored to the Available Data and Reflects the Intended Use of the Device** |
| **Focus is Placed on the Performance of the Human-AI Team** | **Testing Demonstrates Device Performance during Clinically Relevant Conditions** |
| **Users are Provided Clear, Essential Information** | **Deployed Models are Monitored for Performance and Re-training Risks are Managed** |

*https://www.fda.gov/medical-devices/software-medical-device-samd/good-machine-learning-practice-medical-device-development-guiding-principles*

# Augmented Reality (AR) /Virtual Reality (VR)


10/20/21 [FDA Authorizes Marketing of Digital Therapeutic that Uses TV Shows to Improve Vision in Children with Lazy Eye,](#) Luminopia™ One


11/16/21 [FDA Authorizes Marketing of Virtual Reality System for Chronic Pain Reduction](#), EaseVRx

# FDA held a Patient Engagement Advisory Committee meeting to address specific considerations in AR/VR


**PEAC Meeting Details**

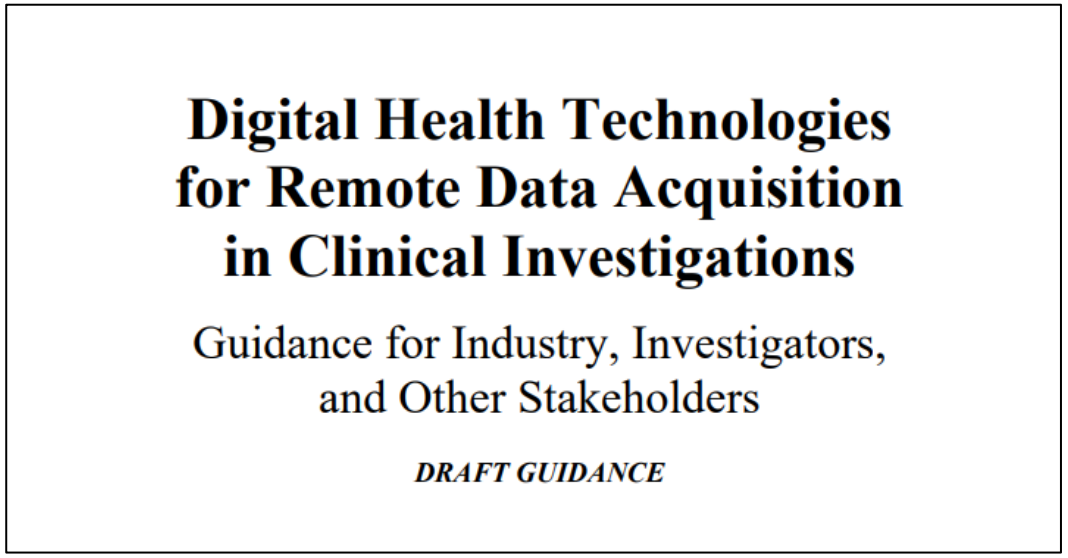
**Topic**: Clinical and device specific considerations for AR/VR technology including in vulnerable populations

**Approach**: Patient Engagement Advisory Committee

***Date**: July 12-13, 2022*

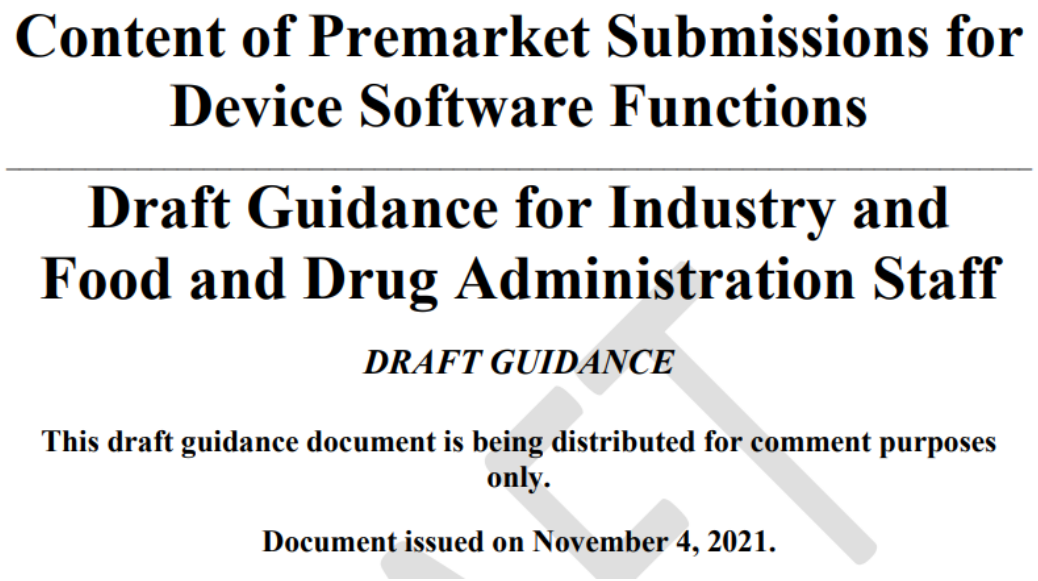
# Guidance Documents

# Draft Guidance on Digital Health Technologies for Remote Data Acquisition in Clinical Investigations




- This draft guidance provides recommendations to facilitate the use of DHTs in clinical investigations
- It is designed to help accelerate efficient medical product development to help bring new innovations and advances to patients
- It builds on the launch of the Digital Health Center of Excellence to empower digital health stakeholders and provide regulatory clarity and collaboration across FDA

# Draft Guidance on Content of Premarket Submissions for Device Software Functions



**Content of Premarket Submissions for Device Software Functions**

**Draft Guidance for Industry and Food and Drug Administration Staff**

***DRAFT GUIDANCE***

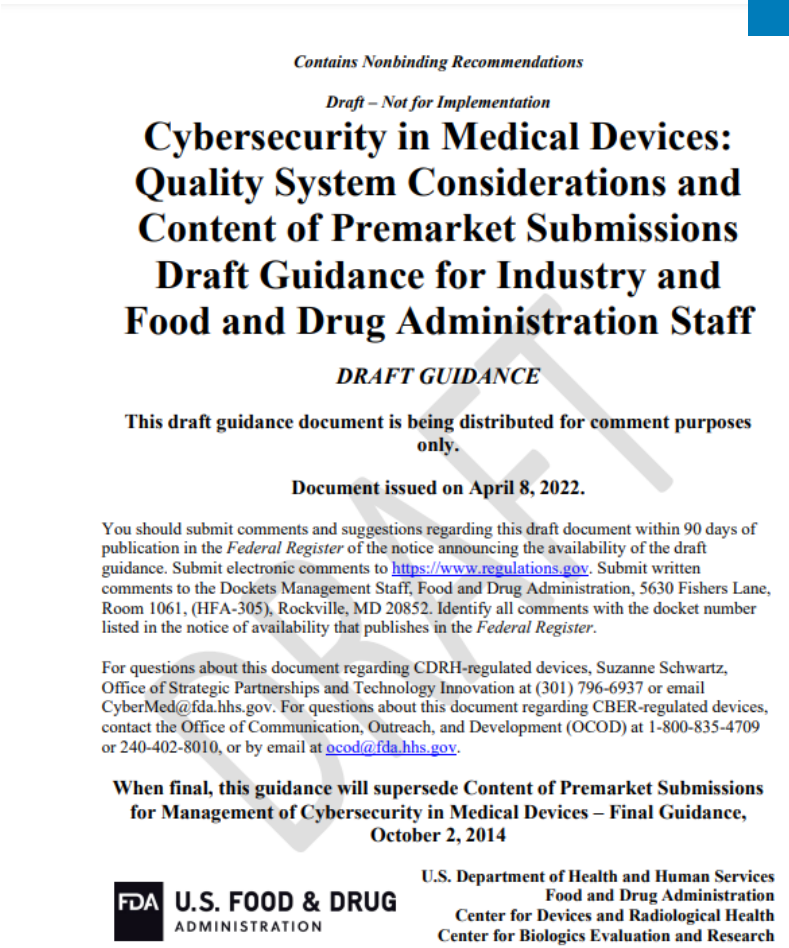
**This draft guidance document is being distributed for comment purposes only.**

**Document issued on November 4, 2021.**

- This draft guidance includes recommendations for documentation that sponsors should include in premarket submissions for FDA's evaluation of device software functions.
- It pertains to software in a medical devices (SiMD) and software as a medical device (SaMD)
- It is intended to help facilitate the review process based on FDA's experience evaluating safety and effectiveness of device software
- It includes specific reference to IMDRF technical document N12 ("Software as a Medical Devices: Possible Framework for Risk Categorization and Corresponding Considerations")

# Draft Cybersecurity Guidance

- Revised draft premarket medical device cybersecurity guidance published April 7, 2022
- Cybersecurity in Medical Devices: Quality System Considerations and Content of Premarket Submissions
- 90-Day comment period closed July 7, 2022
- Changes from 2018 draft guidance include
  - More **detailed technical recommendations** on premarket documentation for cyber risk
  - **Removed risk tiers**; recommends that documentation scale with cyber risk
  - Detailed recommendations on Software Bill of Materials (**SBOM**) and alignment with EO 14028



*Contains Nonbinding Recommendations*

*Draft – Not for Implementation*

**Cybersecurity in Medical Devices: Quality System Considerations and Content of Premarket Submissions Draft Guidance for Industry and Food and Drug Administration Staff**

***DRAFT GUIDANCE***

**This draft guidance document is being distributed for comment purposes only.**

**Document issued on April 8, 2022.**

You should submit comments and suggestions regarding this draft document within 90 days of publication in the *Federal Register* of the notice announcing the availability of the draft guidance. Submit electronic comments to https://www.regulations.gov. Submit written comments to the Dockets Management Staff, Food and Drug Administration, 5630 Fishers Lane, Room 1061, (HFA-305), Rockville, MD 20852. Identify all comments with the docket number listed in the notice of availability that publishes in the *Federal Register*.

For questions about this document regarding CDRH-regulated devices, Suzanne Schwartz, Office of Strategic Partnerships and Technology Innovation at (301) 796-6937 or email CyberMed@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, or by email at ocod@fda.hhs.gov.

**When final, this guidance will supersede Content of Premarket Submissions for Management of Cybersecurity in Medical Devices – Final Guidance, October 2, 2014**

FDA U.S. FOOD & DRUG ADMINISTRATION

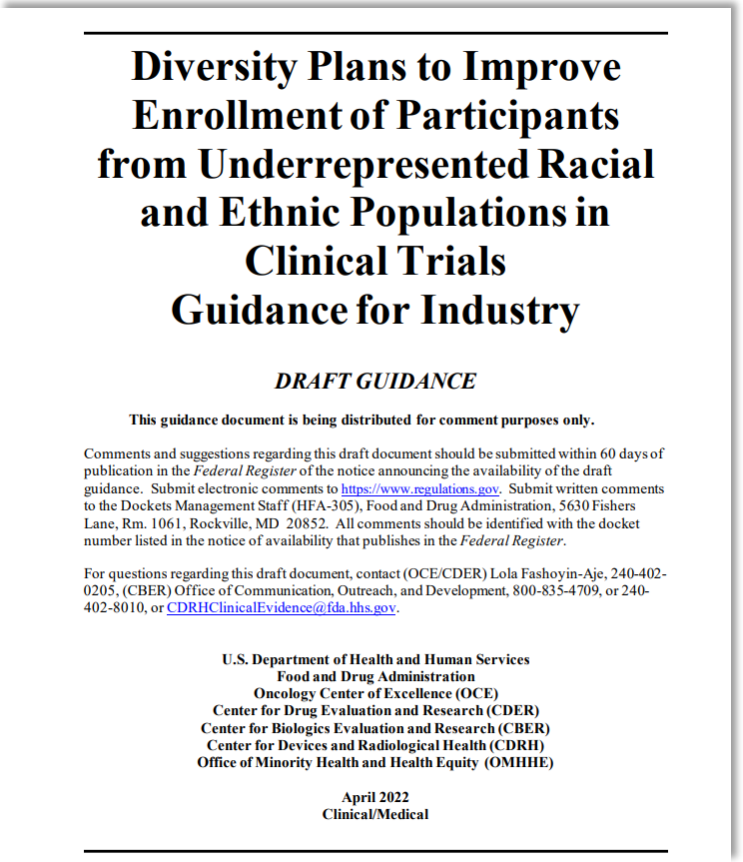
**U.S. Department of Health and Human Services**
**Food and Drug Administration**
**Center for Devices and Radiological Health**
**Center for Biologics Evaluation and Research**

# Draft Guidance on Diversity in Clinical Trials

- Despite having a **disproportionate burden** for certain **diseases**, **racial and ethnic minorities** are **frequently underrepresented** in biomedical **research.**

- Adequate **representation** helps ensure that the **data** generated **reflect the racial and ethnic diversity** of the intended use population and may potentially **identify safety or effectiveness outcomes** that may be associated with, or occurring more frequently, **within these populations**

- This draft guidance includes recommendations for developing **race and ethnicity diversity plans** to enroll more participants from underrepresented racial and ethnic populations in the U.S. into clinical trials



**Diversity Plans to Improve Enrollment of Participants from Underrepresented Racial and Ethnic Populations in Clinical Trials**
**Guidance for Industry**

***DRAFT GUIDANCE***

**This guidance document is being distributed for comment purposes only.**

Comments and suggestions regarding this draft document should be submitted within 60 days of publication in the *Federal Register* of the notice announcing the availability of the draft guidance. Submit electronic comments to https://www.regulations.gov. Submit written comments to the Dockets Management Staff (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852. All comments should be identified with the docket number listed in the notice of availability that publishes in the *Federal Register*.

For questions regarding this draft document, contact (OCE/CDER) Lola Fashoyin-Aje, 240-402-0205, (CBER) Office of Communication, Outreach, and Development, 800-835-4709, or 240-402-8010, or CDRHClinicalEvidence@fda.hhs.gov.

**U.S. Department of Health and Human Services**
**Food and Drug Administration**
**Oncology Center of Excellence (OCE)**
**Center for Drug Evaluation and Research (CDER)**
**Center for Biologics Evaluation and Research (CBER)**
**Center for Devices and Radiological Health (CDRH)**
**Office of Minority Health and Health Equity (OMHHE)**

**April 2022**
**Clinical/Medical**

# The Diversity Plan

- A Diversity Plan is recommended for medical products for which an IDE is required and/or for which clinical studies are intended to support a device marketing submission.

- The Diversity Plan should include information such as
  - Enrollment goals
  - An action plan to enroll and retain diverse participants
  - Efforts to explore the potential for differences in response to treatment associated with race and ethnicity throughout clinical development.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