



Use of an Investigational Device in Human Subjects Research

Content Applies To

Mayo Clinic Human Research Protection Program

Research for which the Mayo Clinic IRB is the IRB of Record

Purpose

The purpose of this document is to direct and inform Investigators, IRB Committee members and IRB staff of the requirements for human subject research when using FDA-regulated investigational devices.

Key Words

Device: An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other, similar or related article, including a component part or accessory which is:

- Recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them;
- Intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals, or
- Intended to affect the structure or any function of the body of man or other animals, and which does not achieve its primary intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes.

Investigational Device: A device, including a transitional device that is the object of an investigation.

Investigational Device Exemption (IDE): A FDA approved investigational device exemption (IDE) permits a device that otherwise would be required to comply with a performance standard or to have FDA pre-market approval to be shipped lawfully for the purpose of conducting investigations of that device.

Significant Risk Device (SR): A SR device is an investigational device that:

- Is intended as an implant and presents a potential for serious risk to the health, safety, or welfare of a subject
- Is purported or represented to be for use supporting or sustaining human life and presents a potential for serious risk to the health, safety, or welfare of a subject
- Is for a use of substantial importance in diagnosing, curing, mitigating, or treating disease, or otherwise preventing impairment of human health and presents a potential for serious risk to the health, safety, or welfare of a subject; or

- Otherwise presents a potential for serious risk to the health, safety, or welfare of a subject.

Non-Significant Risk Device (NSR): An NSR device is any other investigational device that does not meet the definition for an SR device.

Abbreviated Investigational Device Exemption Requirements: The FDA considers an investigation of a non-significant risk device to have an approved Investigational Device Exemption when the IRB concurs with the initial non-significant risk determination of the sponsor/Investigator and approves the study. Therefore, both the sponsor and the Investigator are expected to comply with 21 CFR 812.2(b), the abbreviated FDA requirements for IDEs. If the study is Investigator- initiated, then the Investigator is also acting as the sponsor.

Policy

It is the policy of the Mayo Clinic Office for Human Research Protection IRB to require that Investigators comply with all applicable regulations pertaining to investigational devices and that all proposed uses are reviewed and approved by the IRB as defined by Federal regulations.

A Convened IRB will review the initial research project application. Applications that meet 21 CFR 56.110 and/or 45 CFR 46.110, category 1(b) criteria may be reviewed by expedited review procedure rather than a convened IRB. Initial project applications, modifications and continuing review reports are reviewed using the criteria described in this document and in the documents *IRB Initial Approval of Research, Modifications to Previously Approved or Exempt Research* and *Continuing Review of Research Projects*.

Investigator Responsibilities and Determination of Risk

1. The Investigator requests IRB approval for the use of an investigational device in a research project and submits an IRB application. In the application, the Investigator provides (or provides documentation of) the following information:
 - Level of risk - Significant Risk or Non-Significant Risk - as determined by the sponsor when the device is used as described in the research project proposal.
 - The Investigator will inform the IRB if other IRBs have reviewed the proposed study and what risk determination was made
 - The Investigator must also inform the IRB of the FDA's assessment of the device's risk, if such an assessment has been made
 - Correspondence from the Sponsor and/or FDA supporting the determination that the proposed use of the device is Non-Significant risk (NSR) or the IDE approval letter or conditional approval letter from the FDA for Significant Risk devices.
 - IDE number (for Significant Risk devices)
 - A description of the device
 - Reports of prior investigations with the device
 - The investigational plan/protocol/research project proposal
 - A description of subject selection criteria

- A description of planned monitoring procedures
 - Proposed consent form(s)
 - IDE exemption criteria, if applicable
 - Any other information that the IRB requires in order to conduct its review and make a determination
2. The Investigator will notify the Sponsor of the IRB's risk determination.
 3. The Investigator is responsible for ensuring the research project is conducted according to the IRB approved research project proposal and in compliance with the requirements of this and other applicable requirements and regulations.
 4. The Investigator is responsible for protecting the rights, safety and welfare of the subjects.
 5. The Investigator must promptly report all unanticipated problems involving risk to human subjects or others (UPIRTSO) or any serious or continuing noncompliance to the IRB. See IRB document *Submitting a Reportable Event to the IRB*.
 6. The Investigator is responsible for controlling the investigational device.
 7. The Investigator will not make changes in the research without IRB approval, except where necessary to eliminate apparent immediate hazards to human subjects.
 8. The Investigator must comply with IRB and regulatory requirements for the initial, modification, continuing review report submissions to the IRB for review and approval.

Convened IRB Responsibilities

A Convened IRB reviews the application and makes a determination of risk based on the proposed use of the device as proposed in the study under review, *not on the device alone*. The IRB may consult with the FDA for its opinion.

- If a non-significant risk (NSR) determination is made by the IRB, the IRB will continue its review to determine whether the research proposal meets the criteria for IRB approval. If the NSR device study receives IRB approval, the Investigator and sponsor are expected to comply with 21 CFR 812.2(b), the abbreviated FDA requirements for IDEs (see below).
- If the IRB disagrees with the sponsor's **Non-Significant Risk** assessment and makes a determination that the proposed use of the device presents **Significant Risk**, the IRB informs the Investigator, and where appropriate, the sponsor. In this case, the IRB will review the research project again only after the sponsor has obtained an IDE and the IDE approval letter or conditional approval letter from the FDA has been submitted to the IRB.
- If the FDA does not approve an IDE, study of the device is not allowed.
- If the **FDA** rules that the research project is **Significant Risk** after the sponsor and the IRB have determined that the research project is NSR and the research project has been initiated, the IRB will suspend the currently approved study detailing criteria for suspension.

- The research project may not reopen until an IDE is approved by the FDA and the approval letter or conditional approval letter from the FDA is submitted to the IRB for review by a Convened IRB.

Abbreviated Investigational Device Exemption Requirements

The FDA considers an investigation of an NSR device to have an approved Investigational Device Exemption (IDE) when the IRB concurs with the NSR determination of the Investigator/sponsor and approves the study. FDA documentation is not required. Therefore, both the sponsor and the Investigator are expected to comply with 21 CFR 812.2(b), the abbreviated FDA requirements for IDEs, as specified below. If the study is Investigator- initiated, then the Investigator is also acting as the sponsor.

21 CFR 812.2(b): The following categories of investigations are considered to have approved IDEs unless FDA has notified a sponsor under 812.20(a) that approval of an application is required:

(1) An investigation of a device other than a significant risk device, if the device is not a banned device and the sponsor:

(i) Labels the device in accordance with 21 CFR 812.5;

(ii) Obtains IRB approval of the investigation after presenting the reviewing IRB with a brief explanation of why the device is not a significant risk device, and maintains such approval;

(iii) Ensures that each Investigator participating in an investigation of the device obtains from each subject under the Investigator's care, informed consent under 21 CFR 50 and documents it, unless documentation is waived by an IRB under 21 CFR 56.109(c).

(iv) Complies with the requirements of 21 CFR 812.46 with respect to monitoring investigations;

(v) Maintains the records required under 21 CFR 812.140(b) (4) and (5) and makes the reports required under 21 CFR 812.150(b) (1) through (3) and (5) through (10);

(vi) Ensures that participating Investigators maintain the records required by 21 CFR 812.140(a)(3)(i) and make the reports required under 21 CFR 812.150(a) (1), (2), (5), and (7); and

(vii) Complies with the prohibitions in 21 CFR 812.7 against promotion and other practices.

Studies of Custom Devices

- IRB approval for use of a custom device is not required when the use is solely for **clinical care**.
- If a custom device will be used in a research project to collect safety and effectiveness data for FDA approval of commercial distribution, an Investigator must submit the research project to the IRB. A Convened IRB will review the research project using the criteria described in this document and the document *IRB Initial Approval of Research*.

Investigational Device Exemptions 21 CFR 812

An investigation involving a device is exempt from IDE regulations if it involves the following categories of devices:

1. The device, other than a transitional device, was in commercial distribution immediately before May 28, 1976, when used or investigated in accordance with the indications in labeling in effect at that time.

OR

2. The device, other than a transitional device, was introduced into commercial distribution on or after May 28, 1976 and the FDA has determined the device to be substantially equivalent to a device in commercial distribution immediately before May 28, 1976, and that is used or investigated in accordance with the indications in the labeling FDA reviewed under subpart E of part 807 in determining substantial equivalence.

OR

3. The device is a diagnostic device, and the sponsor complies with applicable federal requirements, and if the testing:
 - a. Is noninvasive
 - b. Does not require an invasive sampling procedure that presents significant risk
 - c. Does not by design or intention introduce energy into a subject

AND

 - d. Is not used as a diagnostic procedure without confirmation of the diagnosis by another, medically established diagnostic product or procedure

OR

4. The device is undergoing consumer preference testing, testing of a modification, or testing of a combination of two or more devices in commercial distribution, if the testing is not for the purpose of determining safety or effectiveness and does not put subjects at risk.

OR

5. The device is a custom device used solely for clinical care. IRB approval for use of a custom device is not required when the use is solely for **clinical care**.

Emergency Use

An emergency use of an investigational device by a clinician without prior IRB review and approval is permitted under 21 CFR 56.104(c) - *Emergency Use of a Test Article*. See IRB document *Emergency Single-Case Use of an Investigational Device, Drug or Biologic Product*. The one-time emergency use of an investigational device must be reported to the IRB via the electronic system within 5 days of the use.

Sponsor-Investigator Resources

The Mayo Clinic [Office of Research Regulatory Support \(ORRS\)](#) provides assistance to Mayo Clinic Investigators working on FDA regulated research involving drugs, biologics, devices or other test articles. It is a centralized resource for information, expertise, and support related to the conduct of clinical research under Investigator-initiated INDs or IDEs. See IRB document *Reporting Requirements for Sponsor-Investigators Conducting Investigational New Drug (IND) or Investigational Device Exemption (IDE) Research*.

Related Documents

[Control of Investigational Devices Policy](#)

[Reporting Requirements for Sponsor-Investigators Conducting Investigational New Drug \(IND\) or Investigational Device Exemption \(IDE\) Research](#)

[Emergency Single-Case Use of an Investigational Device, Drug or Biologic Product](#)

[IRB Initial Approval of Research](#)

[Modifications to Previously Approved or Exempt Research](#)

[Continuing Review of Research Projects](#)

References

[21 CFR part 812 Investigational Device Exemptions](#)

[21 CFR 50 Protection of Human Subjects](#)

[21 CFR 56 Institutional Review Boards](#)

[21 CFR 56.104\(c\) - Emergency Use of a Test Article](#)

Effective Date

March 20, 2017

Revision History

Date	Synopsis of Change
March 20, 2017	Scheduled review. Under Related Documents, added 'Policy' to 'Control of Investigational Devices'.