

THE NORTH SHORE MEDICAL CENTER Institutional Review Board (IRB) POLICIES AND PROCEDURES	IRB Policy Number: 031.0
Title: <i>Review of Medical Devices</i>	Page: 1 of 5
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I. PURPOSE

This policy defines the procedures for the review of research studies involving human subjects utilizing medical devices by the North Shore Medical Center Institutional Review Board (NSMC IRB).

II. SCOPE

This policy applies to all applications regarding research with medical devices involving human subjects submitted to the NSMC IRB. Non-exempt clinical investigations reviewed and approved by the NSMC IRB must comply with FDA regulations for devices intended for human use 21 CFR 812 Investigational Device Exemptions. It is the responsibility of IRB members to assure that approved protocols meet these criteria. The determination of whether a proposed activity constitutes research involving human subjects is described in NSMC IRB Policy 027.

III. DEFINITIONS

Department of Health and Human Services (DHHS) definitions:

Research: A systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. [45 CFR 46.102(d)]

Human Subject: A living individual about whom an investigator (whether professional or student) conducting research obtains (1) Data through intervention or interaction with the individual, or (2) Identifiable private information.

Intervention includes both physical procedures by which data are gathered (for example, venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes.

Interaction includes communication or interpersonal contact between investigator and subject.

Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects. [45 CFR 46.102(f)(1)(2)]

Minimal Risk means that the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. 45 CFR 46.102(i), 21 CFR 50.3(k)

Food and Drug Administration (FDA) definitions:

Clinical Investigation: Any experiment that involves a test article and one or more human subjects and that either is subject to requirements for prior submission to the Food and Drug Administration under section 505(i) or 520(g) of the act, or is not subject to requirements for prior submission to the Food and Drug Administration under these sections of the act, but the results of which are intended to be submitted later to, or held for inspection by, the Food and Drug Administration as part of an application for a research or marketing permit. The term does not include experiments that are subject to the provisions of part 58 of this chapter, regarding nonclinical studies. The terms *research*, *clinical research*, *clinical study*, *study*, and *clinical investigation* are deemed to be synonymous [21 CFR 50.3(c) and 21 CFR 56.102(c)]

Human Subject: An individual who is or becomes a participant in research, either as a recipient of the test article or as a control. A subject may be either a healthy human or a patient. [21 CFR 50.3(g) and 21 CFR 56.102(g)]

Device: An instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including any component part, or accessory, which is (1) recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them, (2) 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 (3) 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 its primary intended purposes.

Custom Device: A device that: (1) Necessarily deviates from devices generally available or from an applicable performance standard or premarket approval requirement in order to comply with the order or an individual physician or dentist; (2) Is not generally available to, or generally used by, other physicians or dentists; (3) Is not generally available in finished form for purchase or for dispensing upon prescription; (4) Is not offered for commercial distribution through labeling or advertising; and (5) Is intended for use by an individual patient named in the order of a physician or dentist, and is to be made in a specific form for that patient, or is intended to meet the special needs of the physician or dentist in the course of professional practice.

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

Transitional Device: A device subject to section 520(l) of the act, that is, a device that FDA considered to be a new drug or an antibiotic drug before May 28, 1976.

Significant Risk Device: An investigational device that: 1) Is intended as an implant and presents a potential for serious risk to the health, safety, or welfare of a subject; (2) Is purported or represented to be for a use in supporting or sustaining human life and presents a potential for serious risk to the health, safety, or welfare of a subject; (3) 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 (4) Otherwise presents a potential for serious risk to the health, safety, or welfare of a subject.

Non Significant Risk: The non significant risk (NSR) category was created to avoid delay and expense where the anticipated risk to human subjects did not justify the involvement of the FDA. If the IRB determines that the study is NSR, no submission to or review by the FDA is necessary before starting studies in humans. NSR device studies, however, should not be confused with the concept of "minimal risk," a term utilized in the Institutional Review Board (IRB) regulations (21 CFR Part 56) to identify certain studies that may be approved through an "expedited review" procedure. For both SR and NSR device studies, IRB approval prior to conducting clinical trials and continuing review by the IRB are required. In addition, informed consent must be obtained for either type of study (21 CFR Part 50).

510(k): A 510(k) Device is a new device that the FDA agrees is substantially equivalent to a device already on the market. 510(k) devices can be marketed without clinical testing. However, if clinical data are necessary to demonstrate equivalence, any clinical studies must be conducted in compliance with the requirements of the IDE, IRB review and informed consent regulations. Because 510(k) devices under clinical investigation fall under the IDE regulations, reporting of adverse or unanticipated 510(k) device effects will follow the same requirements.

Investigational Device Exemption(s) (IDE): An Investigational Device Exemption (IDE) allows the investigational device to be used in a clinical trial in order to collect safety and effectiveness data required to support a Pre-market Approval application (PMA) or a Pre-market Notification [510(k)] submission to the FDA. An IDE permits a device to be shipped lawfully for purposes of conducting investigations of that device. (21CFR 812.1). The FDA assigns each investigational device exemption (IDE) to either category A or B. All clinical investigations of devices must have an approved IDE or be exempt from the IDE regulation, see 21 CFR 812.2.

Sponsor: A person who initiates, but who does not actually conduct, the investigation, that is, the investigational device is administered, dispensed, or used under the immediate direction of another individual. A person other than an individual that uses one or more of its employees to conduct an investigation that it has initiated is a sponsor, not a sponsor-investigator, and the employees are investigators.

Sponsor-investigator: means an individual who both initiates and actually conducts, alone or with others, an investigation, that is, under whose immediate direction the investigational device is administered, dispensed, or used. The term does not include any person other than an individual. The obligations of a sponsor-investigator under this part [21 CFR 812 Subpart C] include those of an investigator and those of a sponsor.

IV. PROCEDURE

1. Exempt Studies

1.1 When a device is being evaluated for safety and effectiveness, the device is considered “investigational” and is subject to the requirements of the IDE regulations 21 CFR part 812, unless exempt.

1.1.1 Exempt studies include:

- Consumer preference testing, testing of a device modification, or testing of two or more devices in commercial distribution if the testing does not collect safety or effectiveness data or put subjects at risk; [21 CFR 812.2(c)(4)]
- Studies of an already cleared medical device in which the device is used or investigated in accordance with the indications in the cleared labeling; [21 CFR 812(c)(1)(2)]
- Diagnostic device studies (e.g., in vitro diagnostic studies) under certain circumstances. [21 CFR 812(c)(3)]

IDE exempt studies that are being conducted to collect data to support either a clinical investigation or a marketing application must comply with the requirement for IRB review and should comply with the requirements for informed consent.

2. Determination of Significant Risk or Nonsignificant Risk Status

2.1 Device investigations are scheduled for review at a convened meeting of the NSMC IRB. As part of its review, the NSMC IRB must categorize the investigation as either “significant risk” (SR) or “nonsignificant risk” (NSR).

- 2.2 The sponsor makes the initial risk assessment, however the NSMC IRB will make a final determination regarding the appropriate SR/NSR category during a convened meeting.
- 2.3 To aid in the determination of the risk status of the device, the IRB shall review information such as reports of prior investigations conducted with the device, the protocol, a description of the participant selection criteria, and monitoring procedures. The sponsor must provide to the IRB a risk assessment and the rationale used in making its risk determination. The sponsor should also inform the IRB whether other IRBs have reviewed the proposed study and what determination was made.
- 2.4 The NSMC IRB will base their determination on the proposed use of the device in the investigation, and not on the device alone. If the proposed use of the device involves a procedure, e.g., a surgical procedure, the NSMC IRB will consider the potential harm that could be caused by the procedure as well as the device.
- 2.4.1 Nonsignificant device investigations
- a) When the IRB makes an NSR determination and the risk to the subjects is determined to be minimal in accordance with 21 CFR 56.102(i), the IRB may vote to allow continuing review to be conducted using the expedited review procedure, as long as the research poses no more than minimal risk to subjects and no additional risks have been identified.
- b) When the IRB concurs with the sponsor that the research is a nonsignificant risk device investigation, the investigation may proceed when fully approved by the NSMC IRB.
- 2.4.2 Significant risk device investigations
- a) When the IRB determines that the research is a significant risk device investigation, the study cannot proceed and the sponsor must submit an IDE application to the FDA. The sponsor must notify the FDA that the IRB has considered the device SR.
- b) The study may proceed as a SR study following FDA approval of an IDE application and IRB approval. The FDA has the ultimate decision in determining if a device protocol is SR or NSR. The NSMC IRB requires documentation from the sponsor that the IDE is in effect before the research is fully approved.
- 3. General Review**
- 3.1 Following determination of risk status by the convened IRB, the research will be reviewed and considered for approval in accordance with IRB Policy 008 *IRB General Review Procedures*.
- 3.2 The IRB may approve or disapprove the proposed research based on local context and its responsibilities to protect human subjects in research even when the FDA has granted approval of the device.
- 4. Control of Devices**
- 4.1 When an investigator is conducting an investigational device investigation, the NSMC IRB requires the investigator to have a written plan for control of investigational devices including ordering, handling, storage, dispensing and return, if applicable. The investigator (or a member of the research study staff) is responsible for the control of investigational devices in accordance with institutional policy and FDA regulations.

- 4.2 The investigator shall maintain accurate, complete, and current records of receipt, use, and disposition of the device which relate to:
- type and quantity of the device, dates of receipt, and the batch number or code mark
 - names of all persons who received, used, or disposed, of each device
 - why and how many units of the device have been returned to the sponsor, repaired, or otherwise disposed of
- 4.3 The investigator is required to inform NSMC Clinical Engineering of all investigational devices approved by the IRB for use at NSMC.

5. Humanitarian Use Devices (HUD)

- 5.1 HUDs with approved Humanitarian Device Exemptions (HDEs) may be used for the FDA-approved indication only with approval of the NSMC IRB. The IRB may vote to allow continuing review to be conducted using the expedited review procedure, as long as the use of the HUD is used within the scope of its approved labeling. The FDA does not consider the use of an HUD within its approved labeling to be research.
- 5.2 When HUDs are being evaluated for safety and effectiveness beyond the scope of the FDA-approved HDE indication, they are subject to the requirements of device investigations as described in this Policy.

6. Custom Devices

- 6.1 Custom devices made in a specific form for a given patient on the order of a physician or dentist as part of their professional practice are not subject to the requirements for device investigations unless the devices are being evaluated for safety and effectiveness. In such cases, custom devices are subject to the requirements of device investigations as described in this Policy.

7. Non-FDA Approved Devices Used as a Tool to Study Human Physiology

- 7.1 Non-FDA approved devices used in research to study human physiology are not subject to the 812 IDE regulations, but must meet the criteria for nonsignificant risk devices to be used in human subjects. When the device is electrically powered, the device must also be reviewed for electrical safety by NSMC Clinical Engineering.

8. Non-Hospital Inventory FDA-Approved Medical Devices Used for Monitoring or Data Collection

- 8.1 Commercially available FDA-approved medical devices used in research according to the FDA-approved labeling are not subject to the 812 IDE regulations, but must meet the same hospital safety standards as medical devices being used for patient care and as such are subject to the requirements of NSMC Clinical Engineering when used within sites over which NSMC has control.

V. RELATED POLICIES, REGULATIONS, AND REFERENCES

IRB 008 IRB General Review Procedures
IRB 027 Human Subjects Research Determination

DHHS Regulations 45 CFR Part 46
FDA Regulations 21 CFR Parts 50, 56, 812