**DATA & SAFETY MONITORING PLAN (DSMP)**

*Template and Guidelines (delete this)*

**PREFACE**

*Investigators should consider using this template when developing the Data and Safety Monitoring Plan (DSMP) for clinical studies sponsored by the National Institute on Aging (NIA).*

*Note that all instructions and explanatory text are shown in italics and should be replaced with the study specific text. There is no need to include sections that are not relevant to the particular study.*

***It is important to note that NIA DSM plans must be consistent with the*** [***NIH Policies and IC Guidance for Data and Safety Monitoring of Clinical Trials***](http://grants.nih.gov/grants/policy/hs/data_safety.htm) ***and the*** [***NIA policies for human intervention studies***](https://www.nia.nih.gov/research/dea/implementation-policies-human-intervention-studies)***.***

***(Above Text to be Deleted After the DSMP Is Completed)***

***Name(s) of PI of Grant***

*Grant #*

*Title of Grant*

*(If a subproject, Name(s) of PI of Subproject)*

*(If a subproject, Title of Subproject)*

**Brief Description of Intervention**: *2-3 sentences, maximum.* E.g., *The intervention being studied is a 12-session (4 3-week modules) intervention, delivered over a 12-week period by community-based social workers to improve emotion regulation skills and improve mood. The four 3-week modules are: 1), 2), 3), 4).*

**Brief Description of Project Design**

*In bulleted or table format.*

***Example****: 240 adult family caregivers to persons with Alzheimer’s Disease, ages 40, and older, will be randomly assigned to one of three conditions:*

1. *Intervention X*
2. *Intervention X + Y*
3. *Intervention Y*

[**Stage of Behavioral Intervention Development**](https://www.nia.nih.gov/research/dbsr/stage-model-behavioral-intervention-development) (*e.g. Stage* *0,* *I, II, III, IV, or V)*

[**NIH Phase III Clinical Trial**](https://grants.nih.gov/grants/glossary.htm)**?** *Yes/No*

Note: An NIH-defined Phase III clinical trial is a broadly based prospective clinical investigation, usually involving several hundred or more human subjects, for the purpose of evaluating an experimental intervention in comparison with a standard or control intervention or comparing two or more existing treatments.

**Multiple Site Trial?** *Yes/No**(If unclear, please describe)*

**List of Specific Aims** (*Bulleted-* Not detailed. Please d*o not include the entire specific aims section- Only the bulleted aims):*

1. *etc.*

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# Particpants Safety

## 1.1 Potential Risks and Benefits for Participants

*This section outlines the potential risks and benefits of the research for the study participants and for society.*

**Potential Risks**: (*Outline potential risks for study participants*.)

**Example:** *The potential risks to study participants include (e.g., there may be temporary slight discoloration of the skin after blood draws.)*

**Potential Benefits**: (*Outline potential benefits for study participants*.)

**Example:** *The potential benefits to study participants include (e.g., ongoing nutritional counseling will be provided to all participants).*

## 1.2 Adverse Event and Serious Adverse Event Collection and Reporting

*This section describes the procedures and timelines for adverse events (AE) and serious adverse events (SAE) collection and reporting.*

*Describe the study’s AE/SAE determination, monitoring and reporting system, standardized protocols and forms for referring and/or treating study participants who experience adverse events.*

*This includes:*

* *The definition of AE/SAEs*
* *Grading scale (i.e., classification of severity, such as mild, moderate, severe)*
* *“Study relatedness” criteria for AE/SAEs*
* *The timeline for reporting AE/SAEs and recipients of AE/SAE reports*

*(i.e., the IRB, the NIA, and the* [*Safety Officer*](https://www.nia.nih.gov/research/grants-funding/implementation-policies-human-intervention-studies#safetyofficer) *and/or Data and Safety Monitoring Board).*

*Additional information regarding AE/SAE definition, grading and relatedness can be found in the* [***NIA Adverse Event and Serious Adverse Event Guidelines***](https://www.nia.nih.gov/sites/default/files/2018-09/nia-ae-and-sae-guidelines-2018.pdf)*.*

*For behavioral intervention studies, it would be helpful to define AEs and SAEs in behavioral terms (e.g., increased stress, inability to cope, suicide attempts, hospitalization due to emotional factors, etc. as appropriate)*

***Please note these RECOMMENDED STATEMENTS:***

* *If no SAEs are expected, this should be stated with an explanation.*
* *Expected SAEs should be listed in the DSMP (Refer to the* [***NIA Adverse Event and Serious Adverse Event Guidelines***](https://www.nia.nih.gov/sites/default/files/2018-09/nia-ae-and-sae-guidelines-2018.pdf)*for details).*
* *All****adverse events******that are both******serious****(SAE)****and******unexpected****(i.e., have not been previously reported for the study's intervention), they should be reported to IRB, NIA PO and to the independent data and safety monitoring body, if one is appointed,* ***within 48 hours*** *of the study's knowledge of SAE.*
* *The summary of all other SAEs should be reported to NIA Program Officer and to the DSMB (or a Safety Officer)* ***quarterly****, unless otherwise requested by the DSMB or a* [*Safety Officer*](https://www.nia.nih.gov/research/grants-funding/implementation-policies-human-intervention-studies#safetyofficer)*.*
* *All deaths in greater than minimal risk studies require expedited reporting (****usually within 24 hours*** *of study’s knowledge of death).*
* *The report of death should be submitted to NIA Program Officer and to the DSMB Chair (or a* [*Safety Officer*](https://www.nia.nih.gov/research/grants-funding/implementation-policies-human-intervention-studies#safetyofficer)*, for studies without the DSMB) or to the designated DSMB member if a DSMB is established.*
* *AEs should be reported per IRB policies. They should also be reported the NIA Program Officer and the study’s Data and Safety Monitoring Board (DSMB), if one is established, at frequency requested by NIA and/or by the DSMB. At minimum, annual reports are required).*

##  1.3 Protection Against Study Risks

*This section provides information on how adverse events and other risks to participants in the study will be mediated and should specify any events that would preclude a participant from continuing with the intervention. This section should also include the informed consent procedures and measures to protect participants against risk during the study. In general, the format and content of this section are similar to the Human Subjects section of the application.*

**Informed Consent Process**. *Explain the informed consent process and how it will be used to protect participants.*

**Example:** *The consent process informs a volunteer about the study, indicates the participation is voluntary and he/she has the right to stop at any time. Risks are enumerated in the informed consent form and described orally during the consent process.*

**Protection Against Risks**. *Describe measures to protect participants against study specific risks.*

**Example:** *The procedures to protect against risks (describe known risks) include (e.g., a safe, hygienic environment for all medical procedures and an experienced, certified staff)*

*If masking is part of the study design, describe criteria and procedures for unmasking and define individuals or committees who have access to unmasked data.*

# INTERIM Analysis

*This section provides information on planned interim analysis, if any, for safety or efficacy monitoring.* If no interim analysis is planned, state so and include the reason. If interim analysis is planned, the DSMP should discuss stopping rules

**Example:***Interim analysis of the study is planned according to the alpha spending rule [Lan and DeMets]. The proportion of expected events is considered as the information statistic. The p-values are constructed to maintain the overall study power of 0.05, two-sided. If the test statistic exceeds the boundary, then the study could be considered for early termination due to emerging differences. The interim look is recommended at the end of year one as we expect approximately 50% of the patients followed for at least six months.*

# Data and Safety monitoring

*This section describes who is responsible for data and safety monitoring, including names, type of information that will be reviewed and frequency of such reviews. Single-site, minimal risk clinical trials and non-interventional studies can be monitored by an independent Safety Officer (SO) or the study staff if NIA deems appropriate, while more than a minimal risk single-site and all multi-site clinical trials and all Phase III clinical trials require the oversight of a Data Safety Monitoring Board (DSMB).*

**Example**: *The Principal Investigator (PI) will be responsible for ensuring participants’ safety on a daily basis. The Data and Safety Monitoring Board (DSMB) will act in an advisory capacity to the NIA Director to monitor participant safety, evaluate the progress of the study, to review procedures for maintaining the confidentiality of data, the quality of data collection, management, and analyses.*

Refer to **[Sample Data and Safety Monitoring Board Charter](https://www.nia.nih.gov/sites/default/files/2019-08/Sample%20Data%20and%20Safety%20Monitoring%20Board%20%28DSMB%29%20Charter.docx)** **(MS Word, 24K)** for details.

*For applications with due dates on or after January 25, 2018, and contract solicitations published on or after January 25, 2018, NIH expects that all sites participating in multi-site studies, which involve non-exempt human subjects research funded by the NIH, will use a single Institutional Review Board (sIRB) to conduct the ethical review required for the protection of human subjects. This policy applies to the domestic sites of NIH-funded multi-site studies where each site will conduct the same protocol involving non-exempt human subjects research. It does not apply to career development, research training or fellowship awards. Implementation of the NIH sIRB policy is expected to reduce unnecessary administrative burdens and systemic inefficiencies while maintaining appropriate human subjects protections.*

*Overall study Principal Investigator (PI) is responsible for distributing adverse event reports and coordination across multiple sites. Also describe how other DSMB communications will be shared with local site PI’s.*

*Applications submitted prior to January 25, 2018 involving multiple sites (unless funding opportunity announcement required single site coordination) study Principal Investigator (PI) is responsible for distributing adverse event reports and coordination across multiple sites. PI should also describe how other DSMB communications will be shared with local site PI’s.*

## 3.1 Frequency of Data and Safety Monitoring

*This section describes the frequency of data and safety monitoring reviews. DSMB meetings can occur in person or via teleconference, and usually occur twice per year. For studies with a SO, safety reports are provided to the SO by the study team at predetermined intervals (for example, biannually).*

**Example:** *The (e.g. DSMB) will meet twice annually, either in-person or by teleconference call to review study progress, data quality, and participants safety.*

*Safety reports are sent to the SO at least twice a year and will include a detailed analysis of study progress, data and safety issues.*

## 3.2 Data Analysis and Coordination

*Describe plans for providing a data processing and analysis function. This function must be administered by a designated individual other than the PIs of the trial. In all cases, all data from this unit must be directly available to the DSMB and Program Officer on request, except raw data identifying individual participants.*

*Plans for notifying subjects of trial results after the conclusion of the trial and providing the subjects' health providers with the appropriate information from the trial, as needed, concerning the individual subject (e.g., cessation of drugs, changes in dosage, etc.) should also be included****.***

## 3.3 Content of Data and Safety Monitoring Report

*This section describes the content of the data and safety monitoring reports. Describe the reporting process for masked and unmasked data (i.e., how will reports be prepared and handled to maintain masking). DSMB members must have access to unmasked reports.*

**Example:** The content of the data and safety monitoring report will include: (*e.g., study status, participant descriptive information, safety information, study quality*)

Refer to the **DSMB Reports Templates** for guidance:

* + [**DSMB Report - Single Site Open**](https://www.nia.nih.gov/sites/default/files/2019-08/NIADSMBReportSingleSiteOpenFINAL.doc) **(MS Word, 323K)**
	+ [**DSMB Report - Single Site Closed**](https://www.nia.nih.gov/sites/default/files/2019-08/NIADSMBReportSingleSiteClosedFINAL.doc) **(MS Word, 342K)**
	+ [**DSMB Report - Multi Site Open**](https://www.nia.nih.gov/sites/default/files/2019-08/NIADSMBReportMultiSiteOpenFINAL.doc) **(MS Word, 449K)**
	+ [**DSMB Report - Multi Site Closed**](https://www.nia.nih.gov/sites/default/files/2019-08/NIADSMBReportMultiSiteClosedFINAL.doc) **(MS Word, 348K)**

## 3.4 DSMB Membership and Affiliation

*If the study requires a DSMB, this section includes a roster of the DSMB or the Safety Officer’s (SO) name and their affiliations.*

*If DSMB members have not yet been identified, you may provide the proposed roster separately along with the other required DSMB materials.*

**Example:** *The following individual(s) has/have accepted position(s) as part of the (e.g., DSMB). DSMB Membership (safety officer) will be reviewed and approved by the NIA. Should there be any questions regarding the independence of the DSMB, it will be addressed and corrected if necessary at that time.*

***Name***

***Title, Organization***

***Brief Description*** *(2-3 sentences) of* ***qualifications/reason*** *for role on DSMB*

***Name***

***Title, Organization***

***Brief Description*** *(2-3 sentences) of* ***qualifications/reason*** *for role on DSMB*

*Etc.*

## 3.5 Conflict of Interest for DSMB/SO

This section describes the conflict of interest procedure for DSMB members or SO.

*The* [***NIA Policy***](https://www.nia.nih.gov/research/dea/implementation-policies-human-intervention-studies) *states:  “****DSMB members should have no direct involvement with the study or conflict of interest with the investigators or institutions conducting the study****.”*

*Each DSMB member will sign a* [***Conflict of Interest Statement***](https://www.nia.nih.gov/sites/default/files/2018-12/nia_dsmb_coi_nda_20181107.docx) *which includes current affiliations, if any, with pharmaceutical and biotechnology companies (e.g., stockholder, consultant), and any other relationship that could be perceived as a conflict of interest related to the study and / or associated with commercial interests pertinent to study objectives.*

*If the study will have oversight by a SO* ***instead*** *of a DSMB, the SO can be from the same institution as the PI that is conducting the study.*

## 3.6 Protection of Confidentiality

*This section describes protection of data presented to the DSMB or SO.*

**Example*:*** *Data will be presented in a blinded manner during the open sessions of the DSMB or in SO reports At DSMB meetings or in SO reports, data and discussion are confidential. Participant identities will not be known to the DSMB members or to the SO.*

## 3.7 DSMB/SO Responsibilities

This section describes the responsibilities of DSMB members.

*Note: The* [**Sample Data and Safety Monitoring Board Charter**](https://www.nia.nih.gov/sites/default/files/2019-08/Sample%20Data%20and%20Safety%20Monitoring%20Board%20%28DSMB%29%20Charter.docx) **(MS Word, 24K)** *provides a detailed list of the DSMB/ SO responsibilities. They include:*

* *Review the entire IRB-approved study protocol and the MOP, with regard to participant safety, recruitment, randomization, intervention, data management, quality control and analysis and the informed consent document.*
* *Recommend changes to the protocol and the informed consent form, when applicable.*
* *Identify the relevant data parameters and the format of the information to be regularly reported.*
* *Recommend participant recruitment be initiated after receipt of a satisfactory protocol. If the need for modifications to the protocol, the MOP, consent form, DSMP or any other study document is indicated by the DSMB and/or the NIA PO, the DSMB will postpone its recommendation for the initiation of participant recruitment until after the receipt of a satisfactory revised protocol(s) or other study documents.*
* *Review masked and unmasked data. These data can be related to safety, recruitment, randomization, retention, protocol adherence, trial operations, data completeness, form completion, intervention effects, gender and minority inclusion.*
* *Identify needs for additional data relevant to safety issues and request these data from the study investigators.*
* *Propose additional analyses and periodically review developing data on safety and endpoints.*
* *At each meeting, consider the rationale for continuation of the study, with respect to progress of randomization, retention, protocol adherence, data management, safety issues, and outcome data (if relevant) and make a recommendation for or against the trial's continuation.*
* *Review and make recommendations on proposed protocol changes, and/or new protocols proposed during the trial. When the DSMBs are unblinded, the Boards may recommend to NIA to appoint a blinded working group of the DSMB to review the proposed protocol changes and make recommendations to NIA on whether to approve the requests.*
* *Provide advice on issues regarding data discrepancies found by the data auditing system or other sources.*
* *Review manuscripts of trial results if requested by the Board or the NIA PO who may seek DSMB review of manuscripts reporting major outcomes prior to their submission for publication.*