Title: Master Data Management Plan for Lead Academic Organizations and Affiliated Organizations

Version: 4.0

Version Date: February 21, 2023

REVISION HISTORY (most recent first)

Version	Effective Date	Summary of Changes
4.0	FEB-21-2023	Additions to section 3, Definitions; update to section 9, Record Retention.
3.0	AUG-02-2022	Addition of Definitions and References sections, major rewrite of sections 5, 6, and 7, minor updates to other sections.
2.0	JUN-07-2021	Clarification of eCRF development, addition of new DTL links.
1.0	AUG-17-2020	Original version of document.

1. INTRODUCTION AND PURPOSE

Data management is the administration and supervision of "tasks associated with the entry, transfer and/or preparation of source data and derived items for entry into a clinical trial database." (CDISC Glossary, December 2019). It is an essential activity for those data collected during the conduct of clinical trials funded by the National Cancer Institute (NCI)/Division of Cancer Prevention (DCP) to ensure data quality and accuracy as well as compliance with Good Clinical Practice (GCP) guidelines, federal regulations such as the Health Insurance Portability and Accountability Act (HIPAA), and NCI/DCP policies and guidelines.

The purpose of the Cancer Prevention Clinical Trials Network (CP-CTNet) Master Data Management Plan (DMP) is to describe data management practices and processes to be followed by Lead Academic Organizations (LAOs) and Affiliated Organizations (AOs) to ensure the authenticity, integrity, and confidentiality of study data and the protection of human subjects participating in CP-CTNet studies. Medidata Rave is the clinical data management system for all CP-CTNet studies and is managed by the Data Management, Auditing, and Coordinating Center (DMACC).

The CP-CTNet Master DMP applies to all studies conducted within CP-CTNet. Study-specific data management plans are developed by DMACC and the LAO, as required.

2. DEFINITIONS

Term	Definition
AE	Adverse Event
AO	Affiliated Organization
AQuIP	Accrual Quality Improvement Program
caDSR	Cancer Data Standards Repository
CDAS	Cancer Data Access System
CDEs	Common Data Elements
CFR	Code of Federal Regulations
CIRB	Central Institutional Review Board
CNT	Cross-Network Trial
CP-CTNet	Cancer Prevention Clinical Trials Network
DCP	Division of Cancer Prevention
DM	Data Manager
DMACC	Data Management, Auditing, and Coordinating Center
DMP	Master Data Management Plan
DTL	Delegation of Tasks Log
eCRF	Electronic Case Report Form
FDA	Food and Drug Administration
GCP	Good Clinical Practice
HIPAA	Health Insurance Portability and Accountability Act
IND	Investigational New Drug
LAO	Lead Academic Organization
M-SOP	Manual of Standard Operating Procedures
MDS	Minimum Data Set
NCI	National Cancer Institute
NDA	New Drug Application

Term	Definition
OHRP	Office for Human Research Protections
PHI	Protected Health Information
PI	Principal Investigator
PII	Personally Identifiable Information
SOP	Standard Operating Procedure
SVAR	System Variable Attribute Report

3. PRINCIPAL INVESTIGATOR RESPONSIBILITY

1. LAO and AO PIs are ultimately responsible for ensuring that CP-CTNet studies are conducted in compliance with the data management requirements as documented in this DMP. Additionally, the LAOs have oversight responsibility for the AOs as specified in SOP 03-03 *Lead Academic Organization Oversight Activities* and SOP 01-02 *Study Initiation Meeting*.

   Note: For LAO-led trials, the LAO is responsible for the day-to-day oversight of all of their AOs and their accruing LAO (as applicable). For CNTs, each participating LAO is responsible for the day-to-day oversight of each of their AOs and their accruing LAO (as applicable).

2. NCI/DCP requires that all data management practices adhere to NCI/DCP policies and guidelines as well as federal regulations, including but not limited to 21 CFR Part 11, GCP, and HIPAA requirements, and that organizations conducting clinical trials under NCI/DCP funding demonstrate their compliance with these regulations. LAO and AO compliance is assessed through routine audit visits performed by DMACC, with additional LAO oversight of the accruing LAOs and AOs.

4. ELECTRONIC CASE REPORT FORM (ECRF) DEVELOPMENT

1. DMACC, in collaboration with the LAO, develops the study-specific SVAR, as per SOP 02-03 *System Variable Attribute Report (SVAR) and Electronic Case Report Form (eCRF) Development*. The SVAR is a customizable workbook used to develop or revise study-specific eCRFs. The *CP-CTNet SVAR Template* contains both mandatory and recommended content, and should be used as the basis for developing the study-specific SVAR. DMACC works with the LAO on revisions and resubmissions until the SVAR is approved by the eCRF Review Team and DCP Study Team. Data fields must be represented as CDEs, and all MDS elements as specified in the *MDS Guidelines* must be included in the SVAR. Refer to SOP 02-03 *System Variable Attribute Report (SVAR) and Electronic Case Report Form (eCRF) Development* and the *CP-CTNet SVAR Template* for additional information.

2. CDEs are used on all eCRFs. All fields included in the SVAR must use CDEs from the caDSR. The eCRF Review Team reviews the CDEs at the time of SVAR review. DMACC works with the CDE Curator to edit existing CDEs (e.g., add alternate question text, permissible values, etc.) and to develop new CDEs when appropriate CDEs are not already available.

3. In general, new CDEs are developed if they are important for collecting data points relative to the science of the protocol and reporting requirements, and/or if they will potentially be analyzed to support the scientific intent of the study.

4. The LAO assesses any special data collection requirements for pharmaceutical collaborators or the accruing LAOs and AOs, and addresses these issues with NCI/DCP and DMACC during protocol development.

5. DATA ENTRY AND PROCESSING

1. Accruing LAOs and AOs use the DMACC Stars registration/randomization system to pre-screen, screen, and enroll participants to a study. See USRMAN01 *CP-CTNet Stars User Guide* and QKREFGD02 *Summary of Enrollment Process* for more information.
2. The accruing LAOs and AOs enter both site-specific AQuIP recruitment journal information and participant-level data into the Medidata Rave clinical data management system, which is the CP-CTNet database of record and subject to NCI and FDA audits. See SOP 02-04 *Participant Recruitment, Retention, Adherence and Reporting Requirements* for more information.
3. The accruing LAOs and AOs are responsible for entering complete, reliable, and accurate study data into Medidata Rave.
4. The accruing LAO or AO PI or designee is responsible for reviewing and approving these data.
5. Procedures should be established by the LAO to maintain the integrity of blinded data as required. Circumstances and procedures for breaking the blind are developed per study and are documented in the protocol.
6. Data entry should be completed in Medidata Rave by the accruing LAOs and AOs within 14 calendar days of the scheduled visit.
7. Data is queried for quality control:
    7.1. For certain data fields, edit checks are pre-programmed into Medidata Rave. Data entry that is non-conformant with data requirements (e.g., out of range, missing, etc.) automatically triggers these edit checks, and queries are then displayed. These queries can be immediately resolved by the site directly in Medidata Rave.
    7.2. Data fields without automatic edit checks are quality controlled by the DMs at DMACC. DMs manually enter queries in Medidata Rave for incorrect or discrepant data in these fields. The fields that are reviewed are study-dependent and include any data that are considered high-risk, such as study endpoint data, study treatment data, adverse events, concomitant medications, off study data, etc. DMs check data weekly and perform a thorough data review every two to three weeks.
8. LAOs have "LAO Staff" access to allow them to review data from their accruing LAOs and AOs and query them for any source data discrepancies detected during source data verification. In order to avoid conflicting or overlapping queries, manual query entry by the LAO should be limited to variances from source data. Any other type of data entry error or discrepancy should be brought to the attention of the DMACC DMs who will generate the appropriate query. See SOP 03-03 *Lead Academic Organization Oversight Activities* for more information.
9. LAO and AO staff can view overdue data and outstanding queries in Medidata Rave; accruing LAOs and AOs should regularly log into Medidata Rave to enter data and resolve queries. All queries must be resolved within 14 calendar days.
    9.1. To respond to a query, accruing LAOs and AOs may either correct the data and provide the reason for the correction directly within Medidata Rave, or provide a reason directly within Medidata Rave why the data are accurate and do not need correction.
10. LAOs and AOs can access data submission/query response status at any time by utilizing the reports in Medidata Rave. See QKREFGD01 *Rave Report Quick Reference Guide* and USRMAN03 *Rave Reports Resource Guide for the CP-CTNet Project*, which are available on the *Medidata Rave* dashboard item page on the CP-CTNet DMACC Portal Gateway.

6. TRAINING AND DOCUMENTATION

1. NCI/DCP requires LAO and AO staff performing any aspect of data management to have the education, training, and experience required to perform their assigned tasks.
2. As stipulated in 21 CFR Part 11, LAO and AO staff who are entering data or officially reviewing data for a study must complete training. Access is not granted to systems holding participant data until training is complete.
    2.1. Required training for Medidata Rave is provided via role-specific eLearnings within Medidata Rave; records of training completion are retained within Medidata Rave. Supplemental Medidata Rave training is available within Medidata Rave, on the *Medidata Rave* dashboard item page on the CP-CTNet DMACC Portal Gateway, and via regular training sessions offered by DMACC.
    2.2. All staff who are performing pre-screening, screening, and enrollment must read and sign-off on USRMAN01 *CP-CTNet Stars User Guide*; this acknowledgement is maintained in Stars. Supplemental Stars training is available on the *Stars* dashboard item page on the CP-CTNet DMACC Portal Gateway, and via regular training sessions offered by DMACC.
    2.3. Any other systems implemented in the conduct of CP-CTNet studies may require training for appropriate personnel.
        - The LAOs and AOs must comply with all CP-CTNet SOPs, guidelines, and other documents distributed by DMACC and/or NCI/DCP. See SOP 02-05 *Creating, Reviewing, and Amending Standard Operating Procedures* for more information.
        - The accruing LAOs and AOs should maintain training documentation.
        - Training requirements are verified by DMACC through routine LAO and AO audit visits, with additional LAO oversight of the accruing LAOs and AOs.
        - LAO and AO staff may access registration links for upcoming CP-CTNet trainings via the Training Registration dashboard item page on the CP-CTNet DMACC Portal Gateway. For more information about registering for CP-CTNet trainings, see REFGD12 *Training Registration Guide*.

7. STUDY CLOSEOUT AND DATABASE LOCK

1. At the completion of a study, data in Medidata Rave must be accurate (reflecting a true representation of the information in the source documents), complete (all required data are keyed into the system), cleaned (all data discrepancies must be corrected and completely resolved), and all required quality assurance and quality control activities must be performed as well as the final site closeout by the LAO completed), and locked for analysis.
2. For the database lock, investigator sign-off on the Verification eCRFs is required.
3. As per the CIRB SOPs, the following items must be true before LAOs may submit the study closure worksheet:
    3.1. The study has been permanently closed to accrual.
    3.2. All participants have completed study intervention.
    3.3. All participants have completed all follow-up activities.
    3.4. All data from accruing LAOs and AOs have been received.

3.5. Analysis or research on biological specimens containing PII, maintained in a repository or as part of the study, is complete. Analysis or research on specimens that were transferred to a separate repository that has ongoing CIRB approval is allowed.

3.6. Data analysis or manuscript preparation that involves the use of or access to PII is complete. This includes possible follow-up analysis in support of manuscript submission and publication.

3.7. The study has met its primary objectives and a final study report/publication has been approved.

- See the CIRB SOPs for more information.

4. After closeout, DMACC will facilitate the end-of-study data management tasks with the LAO (or lead LAO for CNTs), including the submission of the data to the DCP contractor for posting on the CDAS.

8. SECURITY

1. All organizations must establish adequate security procedures to maintain the accuracy, reliability, integrity, availability, and confidentiality of all study participant data and other study-related data.

1.1. Each staff member recorded on the appropriate DTL (*Delegation of Tasks Log*, *Delegation of Tasks Log – Individual Staff*, *Delegation of Tasks Log – Site Principal Investigator*) has a unique username and password for the appropriate systems. Passwords must not be shared.

1.2. PHI/PII should not be included in any email correspondence. If PHI/PII must be included in correspondence, measures should be taken to encrypt the emails and/or files containing this information. All PHI/PII must also be removed from any source documents that may be uploaded to Medidata Rave.

9. RECORD RETENTION

1. Clinical records for all participants, including all source documentation (containing evidence of study eligibility, history and physical findings, laboratory data, results of consultations, etc.) as well as SVARs, CIRB records, and other regulatory documentation must be retained by the Investigator in a secure storage facility in compliance with HIPAA, OHRP, FDA regulations and guidance, and NCI/DCP requirements, unless the standard at the accruing LAO or AO is more stringent.
2. For NCI/DCP studies, records must be maintained for at least three years after the completion of the research. For all studies performed under an IND, the records must be maintained for at least three years after the completion of the research and a minimum of two years after the approval of an NDA. NCI must be notified prior to the planned destruction of any records.
3. The records should be accessible for inspection and copying by authorized persons of the FDA. If the study is conducted outside of the United States, applicable regulatory requirements for the specific country participating in the study also apply.

10. REVIEW OF THE MASTER DATA MANAGEMENT PLAN

1. NCI/DCP and DMACC review the DMP annually to evaluate the currency, adequacy, and effectiveness of the procedures described in the plan, and update as necessary.
2. The DMP is also updated as required by NCI/DCP and DMACC to incorporate any necessary procedure changes.
3. DMACC notifies the LAOs of the revised, approved DMP, including a link to the document. This version supersedes all other DMPs and must be applied to all studies. The LAOs distribute the DMP to the accruing LAOs and AOs.

11. ADDITIONAL INFORMATION

Please send questions and comments to DMACC at DataManagement_CP-CTNet@frontierscience.org

12. REFERENCES

Note: All CP-CTNet SOPs are included in the *CP-CTNet Manual of Standard Operating Procedures (M-SOP)*, which is available on the CP-CTNet DMACC public website.

Resource	ID	Location
Cancer Data Standards Repository (caDSR)	Website	wiki.nci.nih.gov
Cancer Data Standards Repository (caDSR) CDE Browser	Website	cdebrowser.nci.nih.gov
CDISC Glossary	Website	cdisc.org
CIRB SOPs	Procedure	NCICIRB.org
CP-CTNet Acronym List	Reference	Program Resources
CP-CTNet DMACC Website	Website	cp-ctnet-dmacc.org
CP-CTNet Stars User Guide	USRMAN01	Program Resources
CP-CTNet SVAR Template	Template	Program Resources
DCP Delegation of Tasks Log	Reference	Program Resources
DCP Delegation of Tasks Log – Individual Staff	Reference	Program Resources
DCP Delegation of Tasks Log – Site Principal Investigator	Reference	Program Resources
FDA: CFR - Code of Federal Regulations Title 21	Website	accessdata.fda.gov
Lead Academic Organization Oversight Activities	SOP 03-03	Program Resources
MDS Guidelines	Reference	prevention.cancer.gov
NCI/DCP website for CP-CTNet	Website	prevention.cancer.gov
Participant Recruitment, Retention, Adherence and Reporting Requirements	SOP 02-04	Program Resources
Protocol Information Office (PIO) Instructions and Tools	Website	prevention.cancer.gov
Rave Reports Resource Guide for the CP-CTNet Project	USRMAN03	Program Resources
Creating, Reviewing, and Amending Standard Operating Procedures	SOP 02-05	Program Resources
Study Initiation Meeting	SOP 01-02	Program Resources
Summary of Enrollment Process	QKREFGD02	Program Resources
System Variable Attribute Report (SVAR) and Electronic Case Report Form (eCRF) Development	SOP 02-03	Program Resources
Training Registration Guide	REFGD12	Program Resources

13. APPENDICES

1. None