Data Management and Good Clinical Practice

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What is GCP?

Good Clinical Practice is an international ethical and scientific quality standard for designing, conducting, recording and reporting trials that involve participation of human subjects.
Who created GCP?

- International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use
- Published May 1996
- Based on practices in the European Union, Japan, United States, Australia, Canada, Nordic countries, and World Health Organization
How does GCP relate to Data Management?

- Data Management is not mentioned directly very many times.
- General principles apply to data management.
Definitions

1.9 Audit Trail

- Documentation that allows reconstruction of the course of events.
Definitions

1.51 Source Data

All information in original records and certified copies of original records of clinical findings, observations, or other activities in a clinical trial necessary for the reconstruction and evaluation of the trial. Source data are contained in source documents (1.52)
1.52 Source Documents

Original documents, data, and records (e.g., hospital records, clinical and office charts, lab notes, memos, subjects’ diaries or evaluation checklists, pharmacy dispensing records, recorded data from automated instruments, etc.)
1.11 Case report form (CRF)

A printed, optical, or electronic document designed to record all of the protocol-required information to be reported to the sponsor on each trial subject.
Definitions

1.55 Standard Operating Procedures (SOPs)

- Detailed, written instructions to achieve uniformity of the performance of a specific task
**2.10** All clinical trial information should be recorded, handled, and stored in a way that allows its accurate reporting, interpretation, and verification.

**2.11** The confidentiality of records that could identify subjects should be protected, respecting the privacy and confidentiality rules in accordance with the applicable regulatory requirements.
4.9.1 The investigator should ensure the accuracy, completeness, legibility, and timeliness of the data reported to the sponsor in the CRFs and in all required reports.

4.9.2 Data reported on the CRF, that are derived from source documents, should be consistent with the source documents or the discrepancies should be explained.
4.9.3 Any change or correction to a CRF should be dated, initialed, and explained (if necessary) and should not obscure the original entry. That is, an audit trail should be maintained. This applies to both written and electronic changes or corrections (see 5.18.4(n)). Sponsors should have written procedures to assure that changes or corrections in CRFs made by sponsor’s designated representative are documented, are necessary, and are endorsed by the investigator. The investigator should retain records of the changes and corrections.
5.1.1 The sponsor is responsible for implementing and maintaining quality assurance and quality control systems with written SOPs to ensure that trials are conducted and data are generated, documented (recorded), and reported in compliance with the protocol, GCP, and the applicable regulatory requirement(s).
5.1.3 Quality control should be applied to each stage of data handling to ensure that all data are reliable and have been processed correctly.
5.5.1 The sponsor should utilize appropriately qualified individuals to supervise the overall conduct of the trial, to handle the data, to verify the data, to conduct the statistical analyses, and to prepare the trial reports.
5.5.3 When using electronic trial data handling and/or remote electronic trial systems, the sponsor should

(a) Ensure and document that the electronic data processing system(s) conforms to the sponsor’s established requirements for completeness, accuracy, reliability, and consistent intended performance (i.e., validation).
Principles (5.5.3) 2

(b) Maintains SOPs for using these systems.

(c) Ensure that the systems are designed to permit data changes in such a way that the data changes are documented and that there is no deletion of entered data (i.e., maintain an audit trail, data trail, edit trail).
Principles (5.5.3) 3

- (d) Maintain a security system that prevents unauthorized access to the data.
- (e) Maintain a list of the individuals who are authorized to make data changes.
- (f) Maintain adequate backup of the data.
- (g) Safeguard the blinding, if any, during data entry and processing.
5.5.4 If data are transformed during processing, it should always be possible to compare the original data and observations with the processed data.

5.5.5 The sponsor should use an unambiguous subject identification code that allows identification of all the data reported for each subject.
5.18.4 The monitors...should ensure that the trial is conducted and documented properly by carrying out the following activities...
5.18.4 (m) Checking the accuracy and completeness of the CRF, source data/documents, and other trial related records against each other.

(i) The data required by the protocol are reported accurately on the CRFs and are consistent with the source data/documents.

(iv) Visits that the subjects fail to make, tests that are not conducted, and examinations that are not performed are clearly reported as such on the CRFs.
Principles

5.18.4 (n) Informing the investigator of any CRF entry error, omission, or illegibility. The monitor should ensure that appropriate corrections, additions, or deletions are made, dated, explained (if necessary), and initialed by the investigator or by a member of the investigator’s trial staff who is authorized to initial CRF changes for the investigator. This authorization should be documented.
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<th>Sponsor Files?</th>
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Other Regulatory Guidance

- **US Food and Drug Administration (FDA)**
  - 21 CFR Part 11: Electronic Records, Electronic Signatures
  - Guidance for Industry: Computerized Systems Used In Clinical Investigations