

## QUALITY SYSTEMS INSPECTIONS TECHNIQUE

Notice: This draft document represents the Agency' current thinking on the subject of Quality System Inspections. It is provided to the public in order to stimulate discussion, and allow input from any party interested in this topic. It does not represent agency policy. Good Guidance Practices will be followed when formal policy and procedures are developed.

Effective June 1, 1997, the FDA revised the current good manufacturing practice (CGMP) requirements for medical devices, and incorporated them into a Quality System regulation. The Quality System regulation was harmonized with ISO 9001 and ISO 13485. The principles embodied in the Quality System regulation have been accepted worldwide as a means of ensuring that acceptable products are produced.

With the publication of the Quality System regulation, the FDA recognized a total systems approach to regulating medical devices. The FDA is considering using this same systems approach when conducting inspections, which could result in more focused and efficient inspections. The outcomes would include increased compliance with the Quality System regulation, a move towards harmonization of the FDA's inspection technique with the international community and improved medical device product quality. This would increase the FDA's effectiveness in protecting and promoting the public health.

Within an overall Quality System there are various sub-systems, which link to each other. We have identified seven sub-systems that address the specific elements of the regulation. These seven sub-systems are Management; Design Control; Production and Process Control; Corrective and Preventive Action; Document and Change Control; Material Control; Facility and Equipment Control. The FDA is considering using an inspection technique that is based on a sub-system approach.

The following is a draft technique, which steps investigators through the four major sub-systems. The technique, when finalized, will be incorporated into the Guide to Inspections of Medical Device Manufacturers.

Notice: The following document represent one piece of the draft Guide to Quality System Inspections of Medical Device Manufacturers. Numerous other pieces are being developed, such as flow diagrams, narratives, statements of purpose, and others. These draft documents will be available as they are developed.

## **DRAFT**

### Inspectional Objectives

#### **Corrective and Preventive Action Subsystem**

The following information needs to be obtained while inspecting the Corrective and Preventive Action Subsystem:

1. Verify that the CAPA system procedure(s) address the requirements of the quality system regulation. [This should be accomplished prior to arrival on site, if the inspection is pre-announced and the firm agrees.]
2. Identify sources of quality data via review of historical evidence, the Quality Manual, operations, interviews, etc.
3. Verify that the CAPA system procedure(s) ensure that the appropriate quality data (including data fields?) from these sources is analyzed to identify existing and potential causes of quality problems including non-conforming product.
4. Review a sample of analyses and verify that appropriate statistical methods are employed (where necessary) to detect recurring quality problems.
5. Review a sample of CAPA activities and data and verify that the CAPA system procedure(s) were exercised.
6. Verify that relevant information regarding identified quality problems as well as corrective and preventive actions and data were documented.
7. Challenge the quality data information system by sampling raw data from one or more quality data sources and verifying that the data received by the CAPA system is complete, accurate, and timely.
8. Verify as appropriate that the additional applicable QS regulation requirements associated with the quality data sources are met.

#### **Production and Process Control Subsystem**

The following information needs to be obtained while inspecting the Production and Process Control Subsystem:

1. Determine whether the firm has a system for fully verifying and validating manufacturing processes.

2. Determine which processes are verified and which are validated.
3. Select a process for review based on:
  - a. Use of the process for manufacturing higher risk devices;
  - b. Use of the process in manufacturing multiple devices;
  - c. Degree of risk of the process to cause device failures;
  - d. The firm's lack of familiarity and experience with the process;
  - e. Processes not covered during previous inspections;
  - f. CAPA indicators of process problems;
  - g. Variety in process technologies; and Profile classes.
4. Review the specific procedure for the manufacturing process selected and the methods for controlling and monitoring the process. Verify that the process is controlled and monitored.

**Note:** Control and monitoring procedures may include in-process and/or finished device/inspection procedures and environmental control measures.

5. Review any environmental controls and contamination controls identified as necessary by the firm. Assure that the environment is being maintained to meet specifications, and contamination control procedures are implemented effectively.
6. If the process reviewed is not fully verified, assure that reviewing the validation study summary and approval validated the process. If the process is software controlled, assure that the software was validated.
7. Review the device history record to verify that the process is operating within specified limits.
8. If review of the device history record reveals that the process is outside the firm's tolerance for operating parameters and/or rejects:
  - a. Determine whether the nonconformance was handled appropriately;
  - b. Review equipment calibration and maintenance; and
  - c. Evaluate the validation study in full to determine whether the process has been adequately validated.
9. If the process is not validated, review acceptance criteria and procedures to assure the verification methods are appropriate to provide full verification that the product or result meets specifications. Assure that the firm is using valid statistical techniques for data collection and analysis.
10. Verify that personnel have been appropriately qualified to implement validated processes or appropriately trained to implement verified processes.

## **Design Control Subsystem**

The following information needs to be obtained while inspecting the Design Control Subsystem:

1. Select a single design project.
2. Verify that design control procedures, which address the requirements of the quality system regulation, have been defined and documented.
3. Review the design plan for the selected project to understand the layout of the design and development activities including assigned responsibilities and interfaces.
4. Confirm that design inputs were established.
5. Verify that the design outputs that are essential for the proper functioning of the device were identified. Review the firm's process, which was used to determine how these outputs were selected for identification.
6. Ensure that acceptance criteria were established prior to the performance of verification and validation activities by reviewing the documentation associated with the performance of such activities. If possible, select activities, which are associated with outputs identified as essential to the proper functioning of the device.
7. Review a sample of verification activities associated with the essential outputs. Ensure that verification confirmed that these essential design outputs met the design input requirements.
8. Review the evaluations (clinical or other activities) performed to assist in validating the device design. Confirm that design validation data show that the approved design meets the predetermined user needs and intended uses(s).
9. Confirm that the completed design validation did not leave any unresolved discrepancies.
10. If the device is software controlled, review the software validation.
11. Determine if risk analysis was performed.
12. Confirm that design validation was accomplished using initial production devices or their equivalents.
13. Review a sample of changes made during the design process (pre-production changes) and after final design transfer (post-production changes). Ensure that changes were controlled including validated or where appropriate verified.
14. Determine if design reviews were conducted.

15. Review how the design was transferred. Compare the significant elements of the device master record with the finished design outputs to confirm that the design was correctly transferred.

### **Management Controls Subsystem**

The following information needs to be obtained while inspecting the Management Controls Subsystem:

1. Verify that a quality policy, management review procedure, and quality system procedures and instructions have been defined and documented. (This should be accomplished prior to arriving on site.)
2. Verify that a quality policy has been implemented.
3. Review the firm's established organizational structure to assure that it includes provisions for responsibilities, authorities and necessary resources.
4. Confirm that a management representative has been appointed. Determine the purview of the management representative.
5. Verify that management reviews including a review of the suitability and effectiveness of the quality system are being conducted.
6. Confirm that management with executive responsibility ensures that an adequate and effective quality system has been established at the firm.