Overview of the Quality System Regulation and Compliance Interactions

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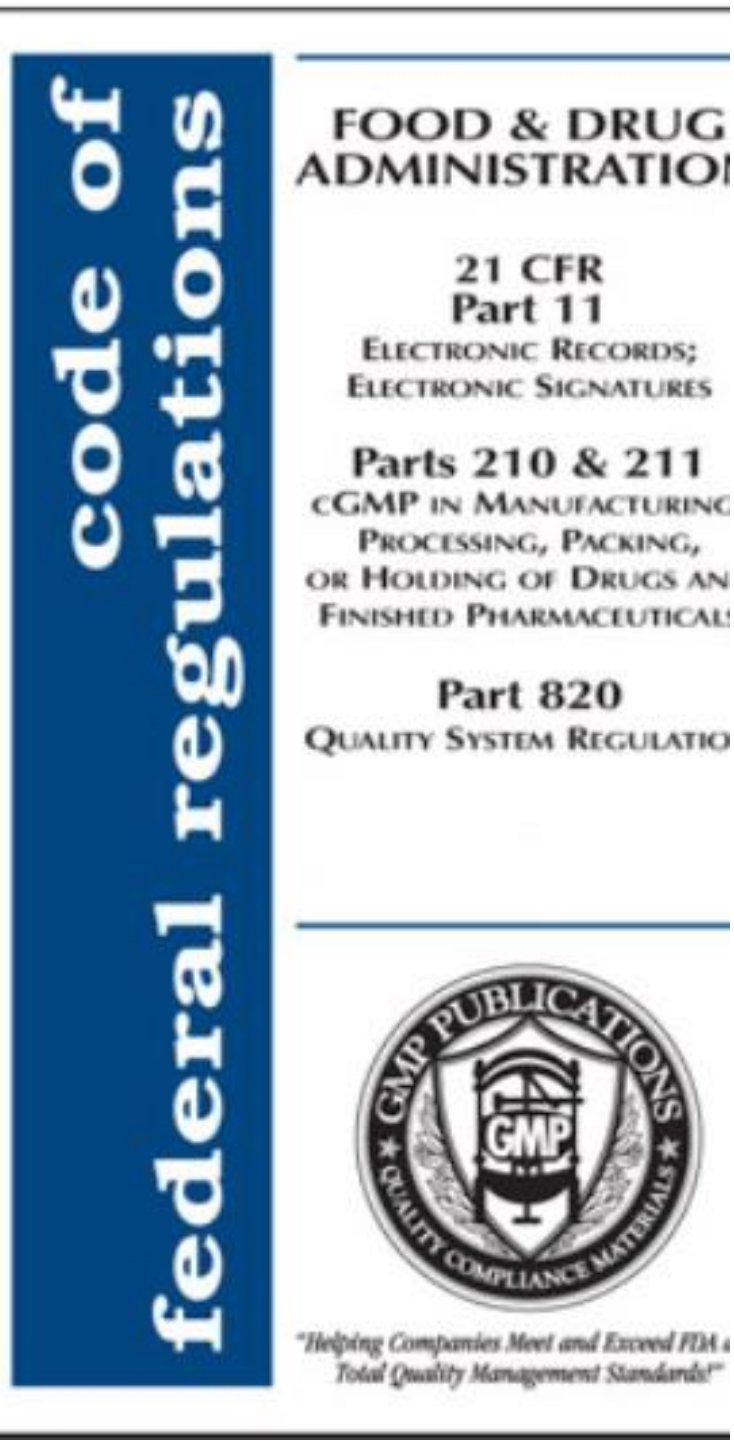
Overview

- **Background - Quality System Regulation**
- **Selected Definitions from 21 CFR 820**
- **Inspections**
  - FDA's Seven Major Quality Subsystems
- **21 CFR 820 Regulations**
- **Proposed Rule and Relationship with ISO 13485:2016**
- **References**



Background

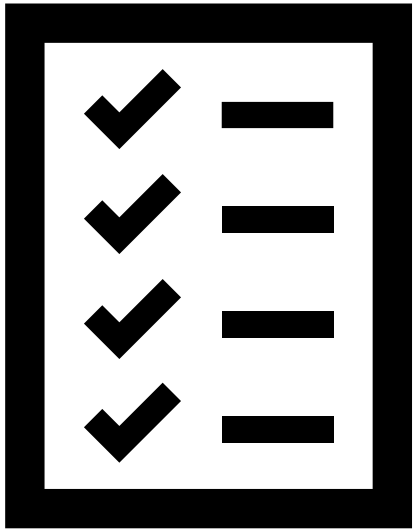
The current Quality System Regulation:

- GMP Regulations promulgated in 1978 for Medical Devices
- Final Rule for a revision of the regulations published in the Federal Register October 7, 1996 and it became effective June 1, 1997
- As part of the 1997 revision, FDA modified it to be consistent with requirements contained in ISO 13485
- Preamble to the 1997 regulation – is an <u>important</u>, often overlooked, part of the regulation.

Background *continued*

The Quality System Regulation:

- The regulation requirements are ***not prescriptive***
- It provides a ***framework*** of basic QS requirements



Definitions

21 CFR 820.3(l) ***Finished device***

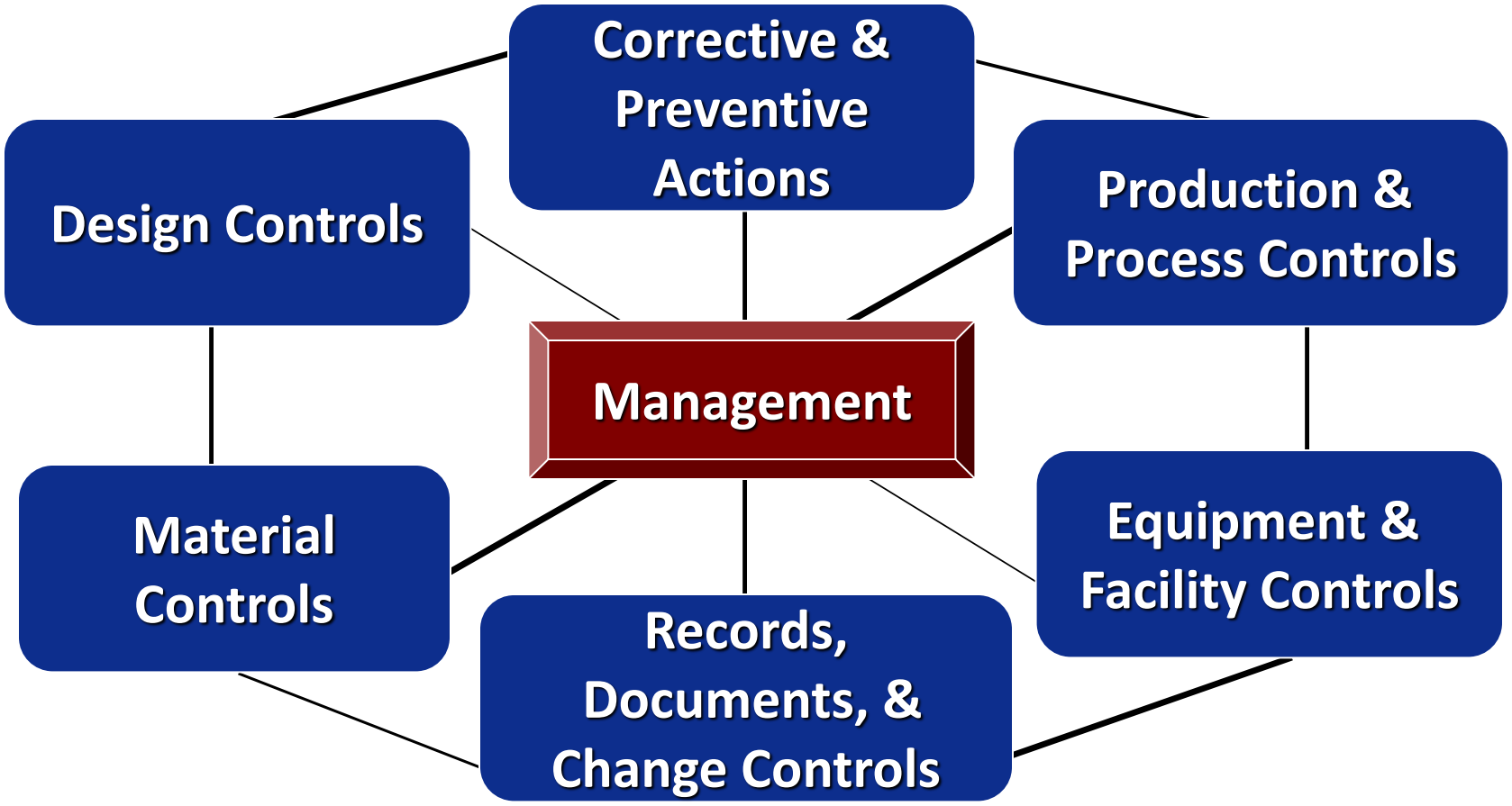
….means any device or accessory to any device that is ***suitable for use or capable of functioning***, whether or not it is packaged, labeled, or sterilized

It's Your Quality System....

A manufacturer must develop a QS commensurate with:

- The ***complexity and risk*** presented by the device
- Complexity of the **manufacturing processes**
- Size and complexity of manufacturing ***facility***

7 Subsystems of a Quality System



Types of Inspections

1) **Pre-Approval Inspections**

2) **Routine Inspections -**
Quality System Inspection Technique (QSIT)

- **"*Level 1*" (Abbreviated)**
  CAPA + P&PC or Design Control
- **"*Level 2*" (Comprehensive)**
  Surveillance or Initial (baseline)

3) **Compliance Follow-Up Inspections**

- **"*Level 3*"**

4) **"For Cause" Inspections**

5) **Risk Based Work Plan**

Management Responsibilities

The Requirements:

- To establish an effective ***quality policy*** (820.20(a))
- To establish adequate ***organizational structure*** (820.20(b))
  - (1) Responsibility, Authority, and Independence
  - (2) Resources
  - (3) Management representative

Management Responsibilities *continued*

The Requirements:

1) To monitor the quality system through **management reviews** and make necessary adjustments. **(820.20(c))**

2) To establish QS **procedures and instructions** **(820.20(e))**

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3) To establish procedures for **quality audits** **(820.22)**

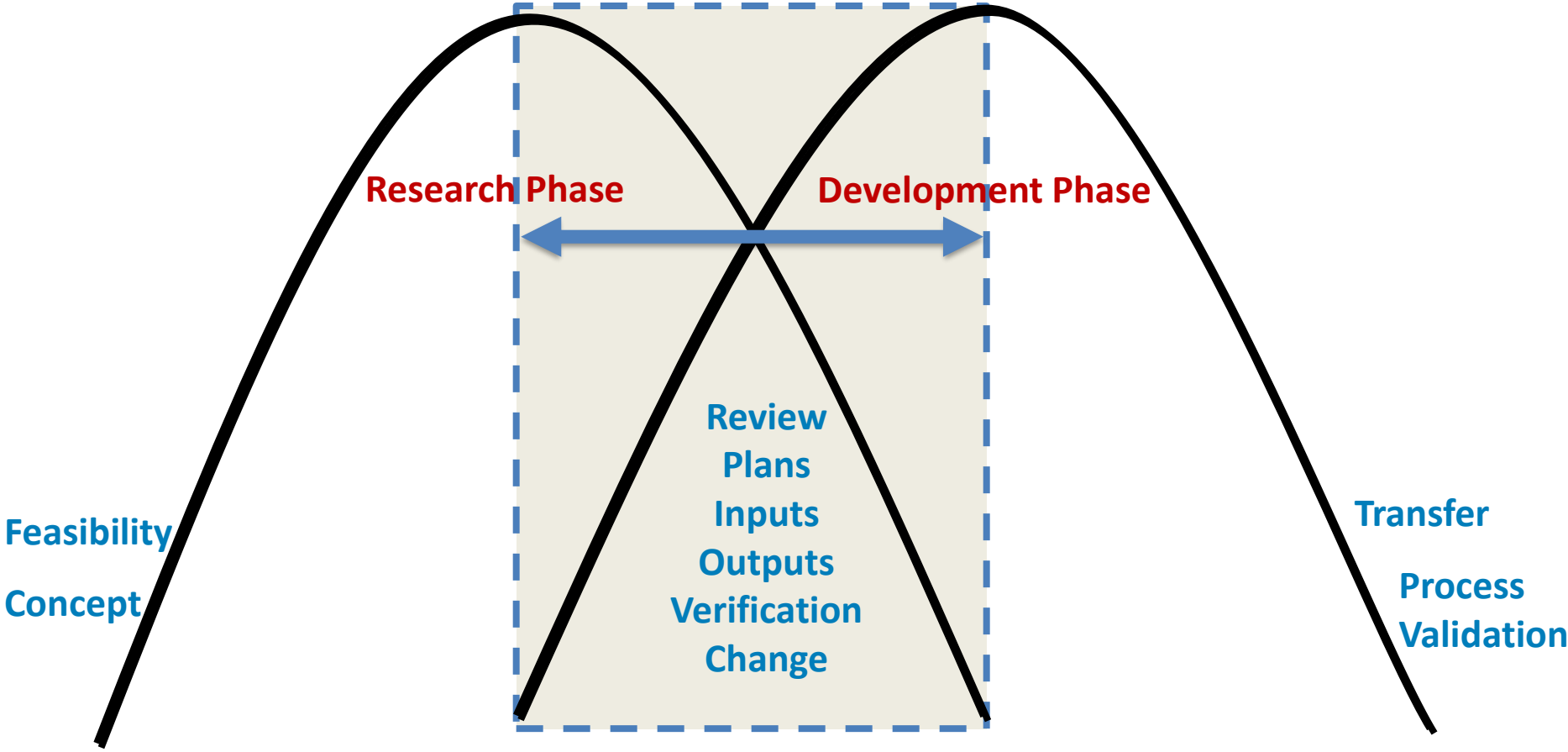
4) To ensure having **sufficient personnel** with necessary education, background, ***training and experience.*** **(820.25)**

Design Controls

Apply To:

- ***Class III***
- ***Class II***
- Some ***Class I*** per 21CFR 820.30(a)(2)

Application of Design Controls



820.30(a)

Design Controls

The Requirement:

- Establish procedures to control the device design to

ensure that design requirements are met

820.30(b)

Design and Development Planning

The Requirement:

- Describe or reference the design and development ***activities*** and define ***responsibility*** for ***implementation.***
- Define interfaces, groups and how they interact

820.30(c)

Design Inputs

The Requirement:

Identify Design Inputs

- Ensure requirements are appropriate and address ***intended*** use of a device and the ***needs of the user***
- Contain the physical and performance ***requirements*** of a device

820.30(d)

Design Output

The Requirement:

Develop Design Outputs:

1) Outputs are results of a design effort at ***each phase*** and at the end of the ***total design*** effort

2) Outputs consist of the device, its ***packaging and labeling***, and the device master record (***DMR***)

820.30(e)

Design Reviews

The Requirement:

Review Design Reviews must:

- Formally ***document*** design results
- Include representatives from ***all functions*** concerned as well as "***independent***" individual(s)
- Conducted ***at appropriate stages*** of design development

820.30 (f)

Design Verification

The Requirement:

- Verify that design outputs meet design inputs
  - Are the product ***inputs being met***?
  - ….and can it be confirmed?

820.30(g)

Design Validation

- **Requirement:**

  Validate the design (***include software validation and risk analysis***)

  - Is the product meeting user needs and intended uses for all specifications, even after remanufacturing and can I prove it?

Design Validation

vs.

Process Validation

Process Validation…(820.75)

….establishing, by objective evidence, that a process ***consistently*** produces a result or product ***meeting*** its predetermined ***specifications.***

820.30(h)

Design Transfer

The Requirement:

Transfer the design to production

- Ensure the device design is correctly translated into ***production specifications***

820.30(i)

Design Changes

The Requirement:

- Establish procedures for identification, documentation, ***validation*** or where appropriate ***verification***, ***review***, and ***approva***l of design changes before implementation

820.30(j)

Design History File

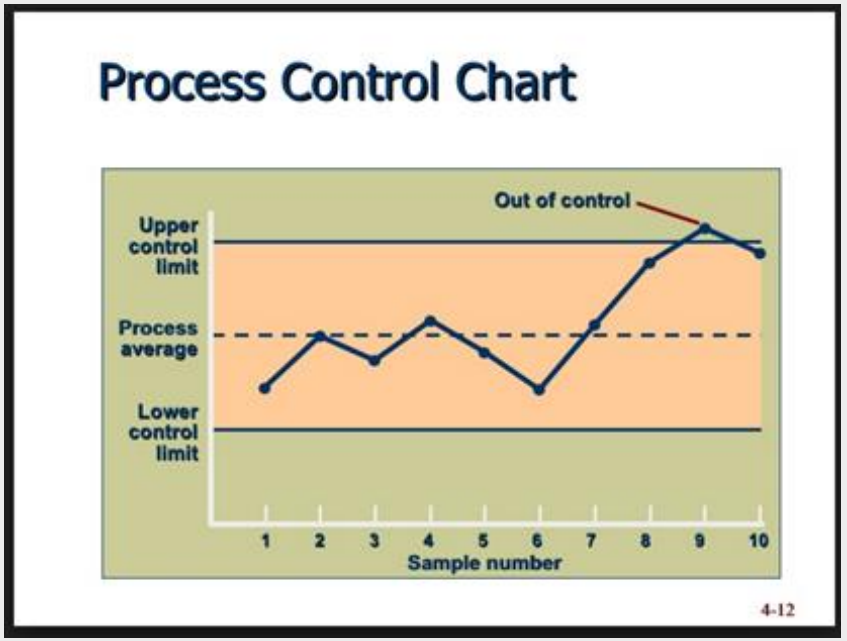
Requirement:

- The DHF shall ***contain or reference*** the records necessary to demonstrate that the design was ***developed*** in accordance with the ***approved*** design plan…
- Each DHF should be ***specific*** for each type of device.

Production and Process Controls Subsystem

The Requirements:

- ***Develop, conduct, control, and monitor production processes*** to ensure device conforms to its specifications



Production and Process Controls Subsystem *continued*

1)	Production and Process Changes	820.70(b)
2)	Environmental control	820.70(c)
3)	Personnel	820.70(d)
4)	Contamination Control	820.70(e)
5)	Buildings	820.70(f)
6)	Equipment	820.70(g)
7)	Manufacturing Material	820.70(h)
8)	Automated Processes (Software Validation)	820.70(i)

820.50

Purchasing Controls

The Requirement

1) Establish and maintain purchasing control procedures

2) ***Evaluate*** supplier, contractors, and consultants

3) Establish, maintain, and approve ***purchasing data***/documents

820.72

Inspection, measuring, and test equipment

The Requirements:

- Ensure all inspection, measuring , and test equipment is suitable for ***intended purposes*** and able to produce ***valid results***.

820.250

Statistical techniques

The Requirements:

- Identify ***valid statistical techniques*** required for the acceptability of ***processes capability and product characteristics***
- Write and base **sampling plans** on a valid statistical rationale
- Ensure ***sampling*** methods are ***adequate***

820.100

Corrective and Preventive Action Subsystem

The Requirement:

1) Collect and analyze information/data from ***various sources***
2) Identify and ***investigate*** product and quality problems
3) Identify and implement effective ***actions to correct and prevent recurrence***
4) ***Verify or validate*** corrective and preventive actions
   a) ***Effective***
   b) ***No adverse effects***

Corrective and Preventive Action Subsystem *continued*

The Requirement:

5) ***Update methods*** and procedures with changes need to correct and prevent problems

6) ***Communicate*** corrective and preventive actions ***to appropriate personnel***

7) Provide information for ***management review***

8) ***Document*** all results and related activities

21 CFR 820 Proposed Rule

Purpose of the proposed rule:

- **The action, if finalized, will harmonize key areas of a device manufacturer's Quality Management System and will more closely align the United States with many other regulatory authorities around the world**
- **The primary proposed change is to incorporate, by reference, ISO 13485:2016**

21 CFR 820 Proposed Rule

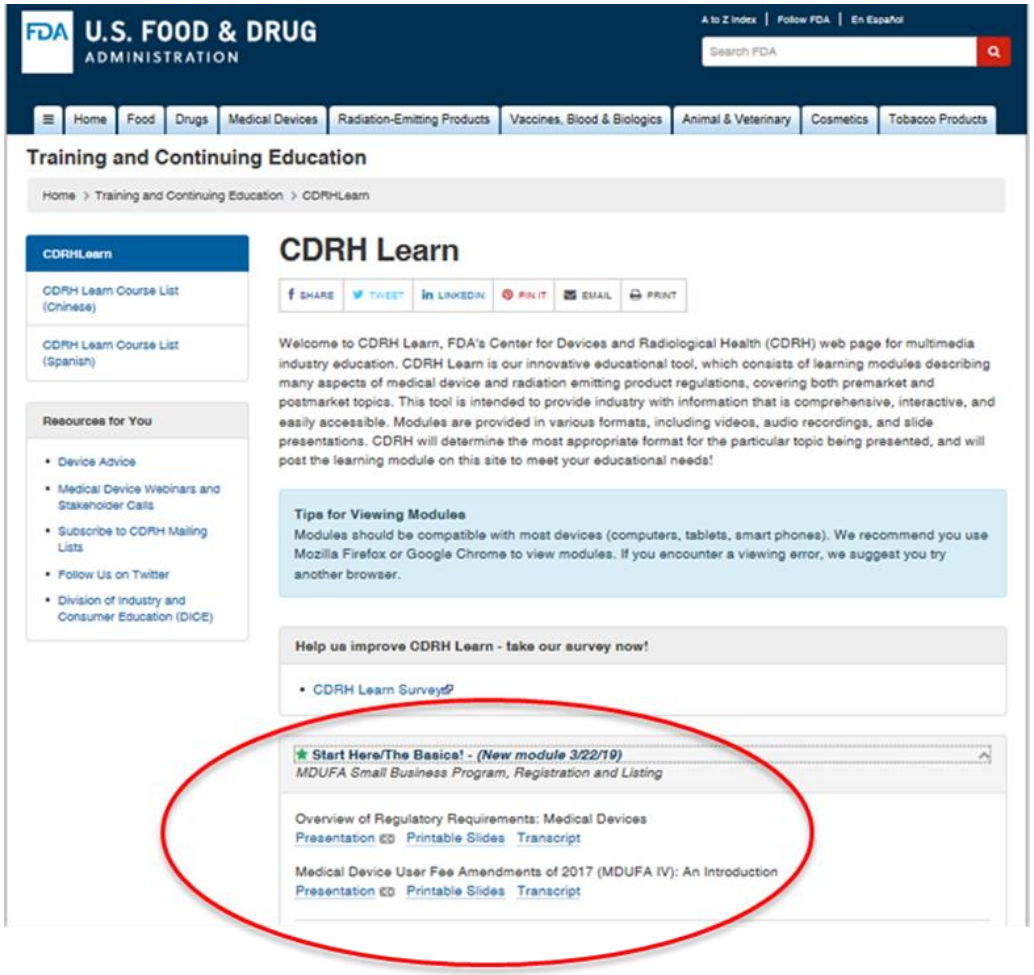
Similarities and Differences of Proposed Rule from Current Regulation:

- **ISO 13485:2016 is very similar to current version 21 CFR 820, but is more explicit about incorporation of risk management**
- **Proposed rule would retain a similar scope, as well as certain definitions and requirement to ensure consistency and alignment between ISO 13485 and existing requirements in the FD&C Act and its implementing regulations**

References

CDRH Learn

https://www.fda.gov/Training/CDRHLearn/default.htm



References

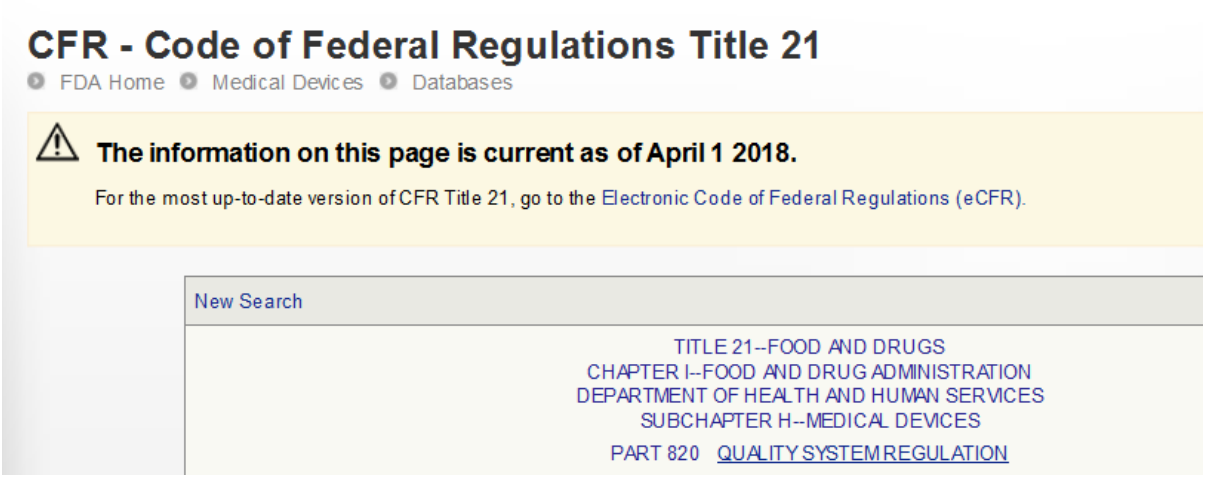
Quality System (QS) Regulation/Medical Device Good Manufacturing Practices

https://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/PostmarketRequirements/QualitySystemsRegulations/default.htm

References

Link specific to 21CFR820 Quality System Regulation

https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=820



References

QSIT

- https://www.fda.gov/ICECI/Inspections/InspectionGuides/ucm074883.htm

References

820 Proposed Rule

Federal Register, including the proposed rule itself and instructions for submitting comments to the docket:

- https://www.federalregister.gov/documents/2022/02/23/2022-03227/medical-devices-quality-system-regulation-amendments

820 Proposed Rule website with additional information and Q&A:

- **https://www.fda.gov/medical-devices/quality-system-qs-regulationmedical-device-good-manufacturing-practices/proposed-rule-quality-system-regulation-amendments-frequently-asked-questions**

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