ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

Session 11 – Good Clinical Practices & Quality Assurance

MTQ - 620/RAS 633

Medical Device Quality & Regulatory Fundamentals

Summer 2023

UNLEASH AMAZING

Joy Frestedt, PhD, CPI, RAC, FRAPS, FACRP

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Joy Frestedt, PhD
612-219-9982
jf@frestedt.com
www.frestedt.com

Frestedt Incorporated **Best of 2021 and 2020 Minneapolis** (Minneapolis Awards Program), ***2019* Company of the Year** (Pharma Tech Outlook) ***Best for Biotechnology Clinical Research 2016 – Minnesota*** (GHP Magazine)

President and CEO of **Frestedt Incorporated** (www.frestedt.com) and **Alimentix, the Minnesota Diet Research Center** (www.alimentix.com), Dr. Frestedt has managed clinical trials, negotiated regulatory submissions and updated quality systems for more than 40 years in health care, pharmaceutical, medical device and food industries including University of Minnesota, Orphan Medical, Johnson and Johnson, Astra Zeneca, CNS Therapeutics, Mayo Clinical Trial Services, Medtronic, and many others.

Dr. Frestedt holds a PhD in Pathobiology from the University of Minnesota Medical School and BA in genetics from Knox College.

A member of AAPS, ASCO, RAPS, SOCRA and many other organizations, Dr. Frestedt is among the "**100 Most Inspiring People in the Life Sciences Industry**" (PharmaVOICE, 2011) and **top 25 "Industry Leaders"** (Minneapolis/St. Paul Business Journal, 2011).

She authored two books: "**Warning Letters: 2016 Reference Guide**" with Barnett International and "**FDA Warning Letters About Food Products: How to Avoid or Respond to Citations**" with Elsevier. Next book about **Writing Clinical Evaluation Reports** is in press….

Session Agenda

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Settle In & Speaker Introduction Steve Gompertz 9:00 – 9:15

GCP Overview Joy Frestedt9:15 – 9:35

Quality Roles in GCP Joy Frestedt 9:35 – 9:55

Regulatory Roles in GCP Joy Frestedt 9:55 – 10:15

Best Practices Joy Frestedt 10:15 – 10:30

Course Wrap-Up Steve Gompertz 10:30 – 11:00

Learning Objectives

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

After attending this course, learners should be able to:

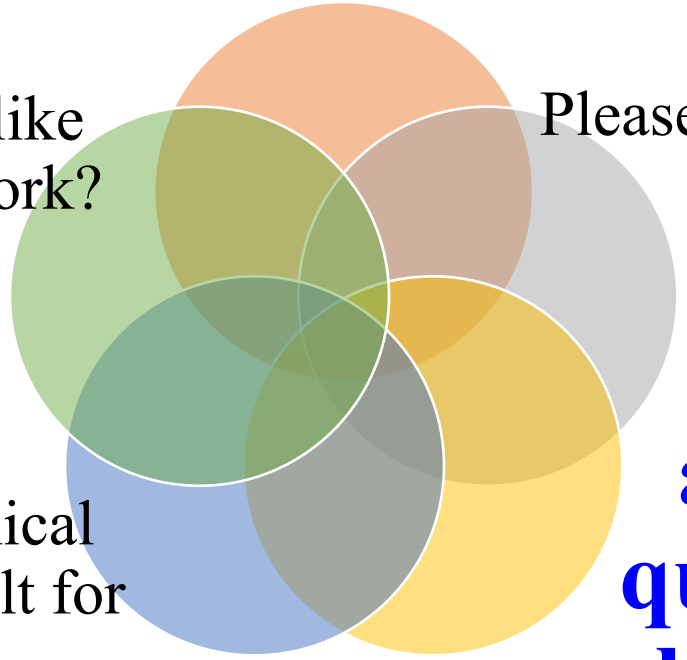
1. Explain GCP
   a) not just what the acronym means, but
   b) how quality systems work in medical device clinical trials
2. List a few quality roles in GCP
3. List a few regulatory roles in GCP
4. Describe a few best practices for GCP QUALITY

Who is attending this course?

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Please introduce yourself and your role in clinical trials.

What do you really like about clinical trial work?



Please describe your clinical trial experience.

What aspects of clinical trials are most difficult for you?

Please share any topics or questions you'd like to be sure we cover.

ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

GCP OVERVIEW

MTQ-620 / RAS-633 - Medical Device Quality & Regulatory Fundamentals

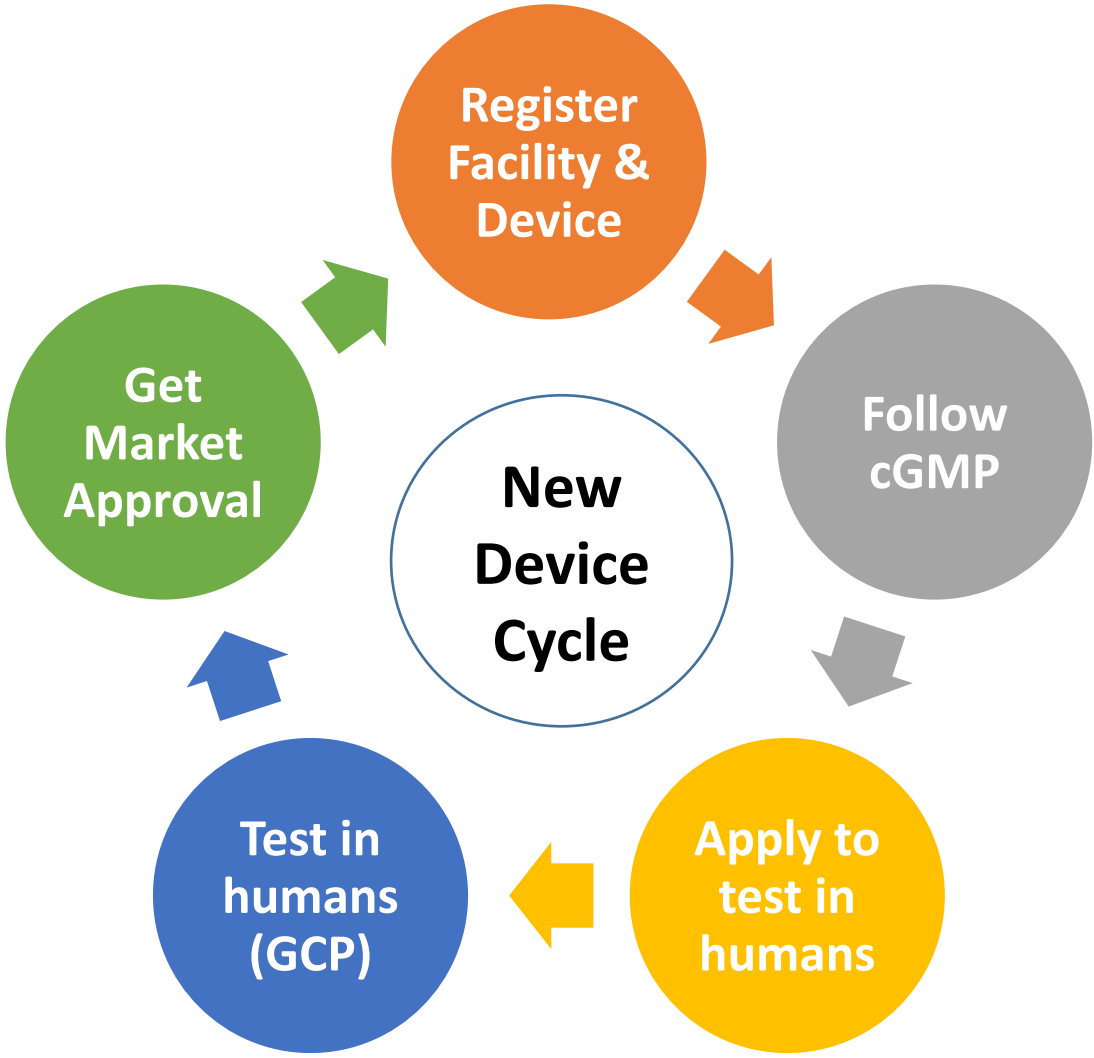
What are GCP and GMP?

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- GxP Emphasis is on the word "**Good**"
  - GCP=**Good** Clinical Practice
  - GMP=**Good** Manufacturing Practice
    - **"Good"** is about **controlling** "practices"
    - "Practices" are about how people work
    - cGMP means mfg. practice is "current"

- **Good**ness is all about **QUALITY**

- **What is the role of quality in GCP?**
  - **To ensure GCP**



GCP is all about Clinical Trials

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

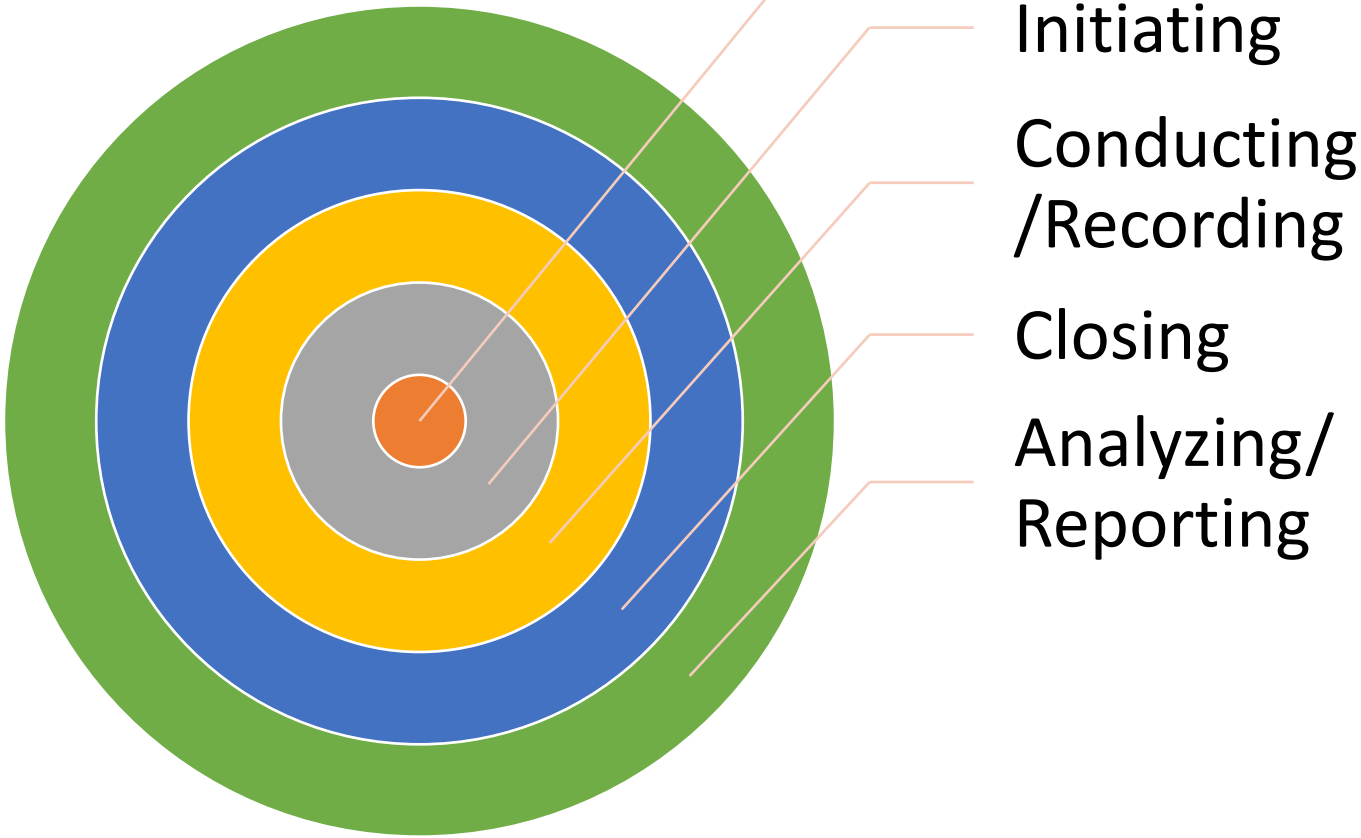
- Protect our patients
- Defend our data integrity
- Ensure we have scientific **QUALITY**!

- We need REGULATIONS & STANDARDS for this work
  - 21CFR820 Quality System Regulations in the US
  - ISO 14155 GCP for Medical Devices in the world

Clinical Trial Activities

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- Clinical trials involve **HUMAN** participants
- Clinical trial Activities are **COMPLEX**
- **Clinical trials must be monitored and audited**



GCP must…

- Provide controls and assurances (QC/QA) to:
  - Enforce international, ethical standards for all humans in all clinical trials, investigations or studies
  - Ensure mutual accountability between regulators, sponsors, sites/IRBs, investigators, patients
  - Protect human (study participant) rights (i.e., clarity of information, safety, well-being, privacy, confidentiality)
  - Create credible and accurate data (data integrity with clean, well, analyzed data and results in all reports)

…all studies (interventional, observational, specimen collection, natural history studies, etc.)

Monitoring, Auditing… QC/QA

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

QC=Quality Control

- Quality at a given moment in time
- Deliver the quality requested
- Identify/react/fix defects
- Subset of quality activities
- **Monitoring**, testing, reporting
- Performed during project
- Manage the quality

QA=Quality Assurance

- Quality over entire project
- Process to assure quality
- Prevent/block defects/vulnerabilities
- Comprehensive quality system
- **Auditing**, reviewing, revising
- Performed after project completed
- Verify the quality

Laws and Regulations Apply

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- Countries have laws and regulations about clinical trials
- For example:
  - US: 21CFR312 (drugs), 612 (biologics), 812 (devices)
  - Canada: CAN-23 (drugs/biologics – devices too…?)
  - EU: EU Reg 536/2014 (Clinical Trial Regulation)
  - 20 Countries – US National Institutes of Health Database NIH ClinRegs database provides international clinical trial regulations - Fogarty International Center @ NIH

NIH ClinRegs database

Aggregates clinical research regulations world wide.

Interesting, no EU or Russia

Ethical Considerations Apply

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- Belmont Report
- Declaration of Helsinki
- International Ethics Committees (IECs)
- Institutional Review Boards (IRBs)

Running a clinical trial assumes certain things about the company running the trial:

1. **QMS** is in place (ISO 13485, 21CFR820 QSR, ISO 14971 risk management, etc.)
2. **cGMP** has produced a safe-enough and effective-enough device for use in a human
3. **GCP** requires a high quality, **ethical** and scientifically sound treatment for each patient

QMS=quality management system; cGMP=current Good Manufacturing Practice, GCP=Good Clinical Practice

Trials must be registered

- Clinical Trials.gov at https://www.clinicaltrials.gov/
- Health Canada at https://health-products.canada.ca/ctdb-bdec/?lang=eng
- ISRCTN Registry at https://www.isrctn.com/search?q=
- WHO, others…

Clinical Data must be EVALUATED

- US: 21CFR814 PMA, 510(k), *de novo*
- EU: MDR (EU Reg 2017/745) and IVDR (EU Reg 2017/746)
- Health Canada: Guidance on clinical evidence requirements for medical devices: Clinical data and evaluation - Canada.ca

ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

QUALITY ROLES IN GCP

MTQ-620 / RAS-633 - Medical Device Quality & Regulatory Fundamentals

Clinical Quality Management

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Quality Management processes include SOPs, computerized quality systems and personnel training

Sponsor is responsible for clinical study quality even if study management is outsourced to third-party

Document control process for **essential documents** such as protocol, IB, informed consent, financial disclosures, etc.

Complete records **maintenance**

Preparation for **monitors** and **auditors**

Identify, justify and **document exceptions** to requirements

SOPS and Work Instructions

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- ❑ **Clinical Trial Registration in Public Database** (ISO 14155:2020 §5.4)
- ❑ **Clinical Trial Risk Management System** (investigational device, procedure and clinical trial process risks) (ISO14155:2020 refers to ISO14971:2012 as REQUIRED)
- ❑ **Protocol/Clinical Investigation Plan** (ISO 14155:2020 §6.4 & Annex A; MDR Annex XV(3))
- ❑ **Investigator's Brochure** (ISO 14155:2020 §6.5 & Annex B; MDR Annex XV(2))
- ❑ **Patient Information Sheet/Informed Consent Form** (ISO 14155:2020 §5.8; MDR Art. 63)
- ❑ **Case Report Form** (ISO 14155:2020 § 6.6, Annex C)
- ❑ **Monitoring** (ISO 14155:2020 §6.7, 7.2, 8.3 & 9.2.4; MDR Annex XV Chapter III(3))
- ❑ **Investigator & Investigator Site Selection** (ISO 14155:2020 §6.8)
- ❑ **Safety Events** (ISO 14155:2020 §5.6.4, 5.6.5, 7.4, 9.2.5, 10.8, Annex F, MDR Art. 80)
- ❑ **Trial Master File** (ISO 14155:2020 § 6.5, Annex E; MDR Annex XV Ch III (3))
- ❑ **Electronic Data Management System** (ISO 14155:2020 §7.8.3; MDR Art. 72(4))
- ❑ **Local Representative / contact person** (if manufacturer based outside of EU; MDR Art.)
- ❑ **Close Out & Report** (ISO 14155:2020 §8.3, 8.4 MDR Annex XV Ch III(7))

https://www.swiss-medtech.ch/sites/default/files/2022-06/20220616_Randall_%20Clinical%20Compliance%20Gap%20Analysis.pdf

PI Sets Minimum Quality

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- PI=Principal Investigator Responsibilities
  - Conducts clinical trial overall (FDA Form 1572)
  - Follows protocol and IRB details
    - e.g., consenting, randomizing, blinding, ongoing reporting
  - Thoroughly familiar with Investigational Product (IP)
  - Treats study participants and tightly controls IP
  - Trains all study staff
  - Proactively **DELEGATES** activities to **RIGHT** people
  - Reviews all activities (sponsor monitors/audits)
  - Reports safety - adverse events (AE)
  - Reports performance – device dysfunctions (DD)

Sponsor-Side Quality team members can help review PI/site selection

Site-Side Quality Team can help PI with team training and oversight

CRC/CRA test, monitor, report

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Clinical Research Coordinator (CRC)

- Site coordinator
- Day-to-day operations
- Patient visits, data records
- Keeps track of visits/data
- Reports safety and efficacy concerns

Clinical Research Associate (CRA)

- Study monitor
- Initiation, interim, close out visits
- Issues queries for correction
- Clarifies patient info/data
- Reports site problems/closes sites

Quality Roles in GCP are EVERYWHERE…
Review charts, data, reports

Timelines, Metrics, Results

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Sponsor

- What is slowing enrollment?
- What problems are challenging data collection?
- How are protocol amendments changing the analysis plan?
- Why are patients withdrawing?
- What data do the Data Safety Monitoring Board need?

Site

- Tracking reports, deliverables, training activities
- Ensuring data are clean and correct
- Double billing?

Sponsor-Side Quality team members can help review PI/site **PROGRESS**

Site-Side Quality Team can help PI with team **RE-training** and **quality improvement**

IRB has quality functions too!

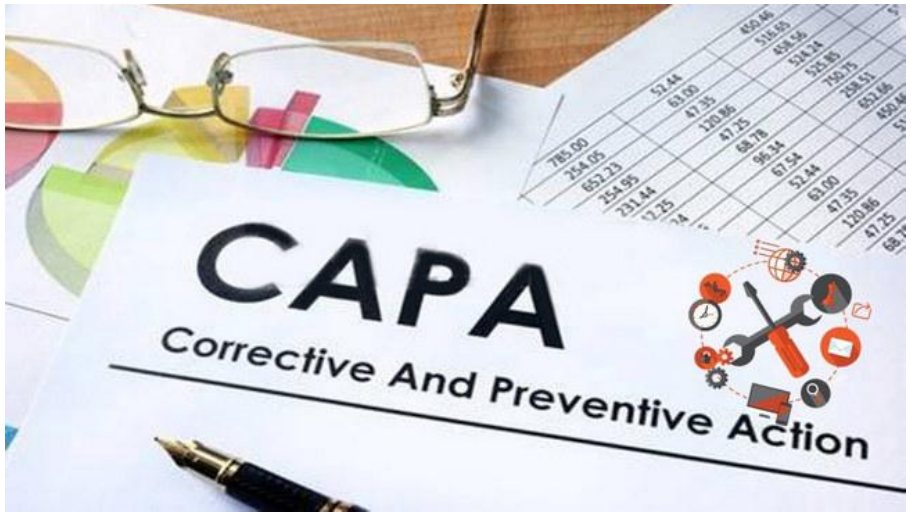
ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- Did the board review the most current protocol and informed consent form?
- Did the investigator reply to all the questions posed?
- Are all the needed documents on file?
- Who's late with their annual updates again…?
- How should we group safety concerns (adverse events) and protocol deviations for board review?

How to stop things going wrong?

- Identify and then research problems
- Clinical Trial Risk Management
  - Based on device design controls
  - Doesn't quite fit
  - CAPA: corrective and preventive actions

Resolving and Preventing Repetitive Problems in Clinical Trials - SOCRA Blog



ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

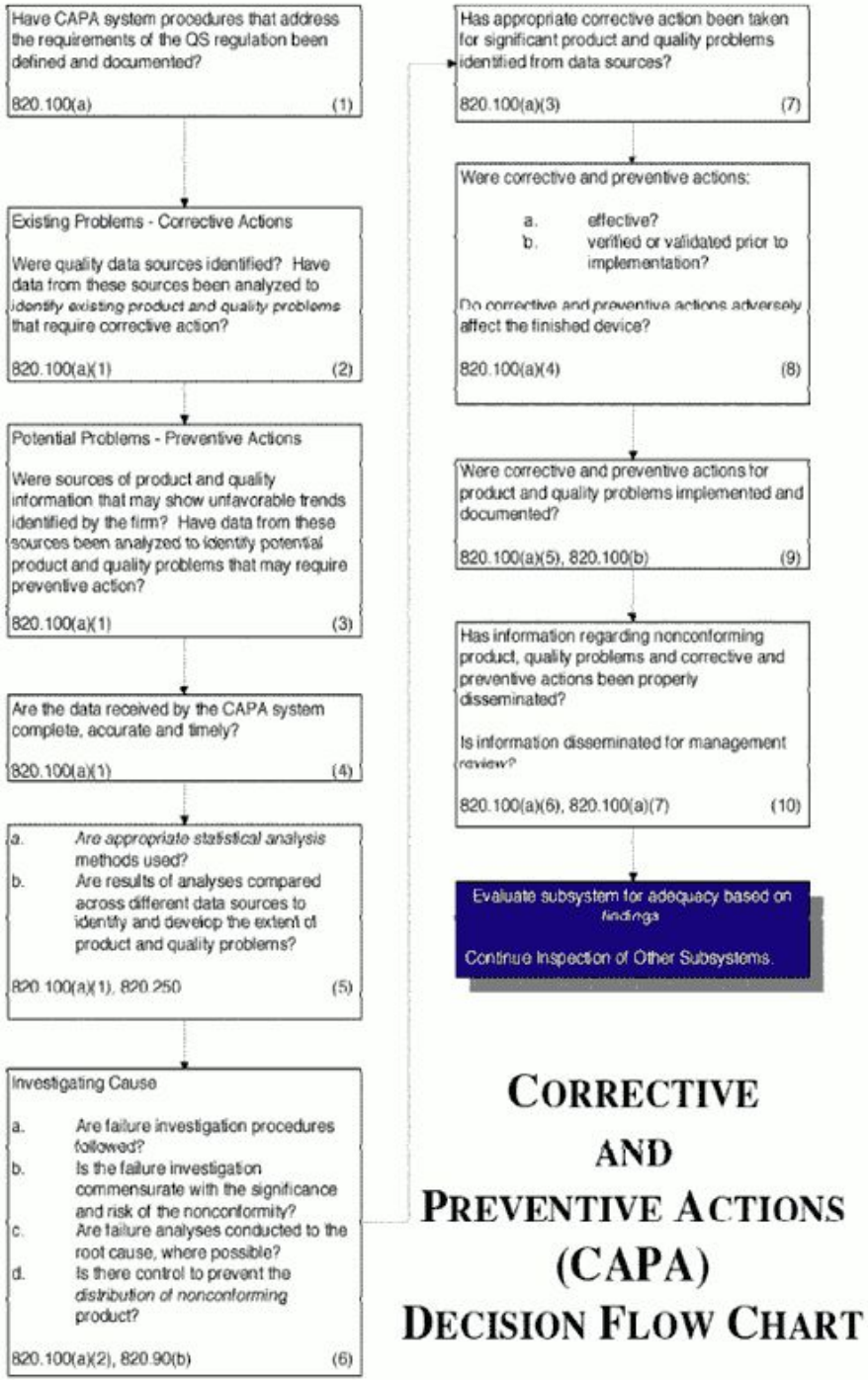
REGULATORY ROLES IN GCP

MTQ-620 / RAS-633 - Medical Device Quality & Regulatory Fundamentals

CAPA as defined by FDA

1) CAPA SOP meets 21CFR820 Quality System Regulation (QSR)
2) Appropriate data used to identify problems
3) Unfavorable trends analyzed to identify problems
4) CAPA data must be complete and accurate
5) CAPA statistical analyses must be appropriate across sources
6) Failure investigation includes root cause analysis
7) Appropriate actions must be taken
8) CAPA effectiveness checks are required (verify and validate)
9) CAPAs must be implemented and documented
10) CAPAs must be reviewed by management

https://www.fda.gov/inspections-compliance-enforcement-and-criminal-investigations/inspection-guides/corrective-and-preventive-actions-capa



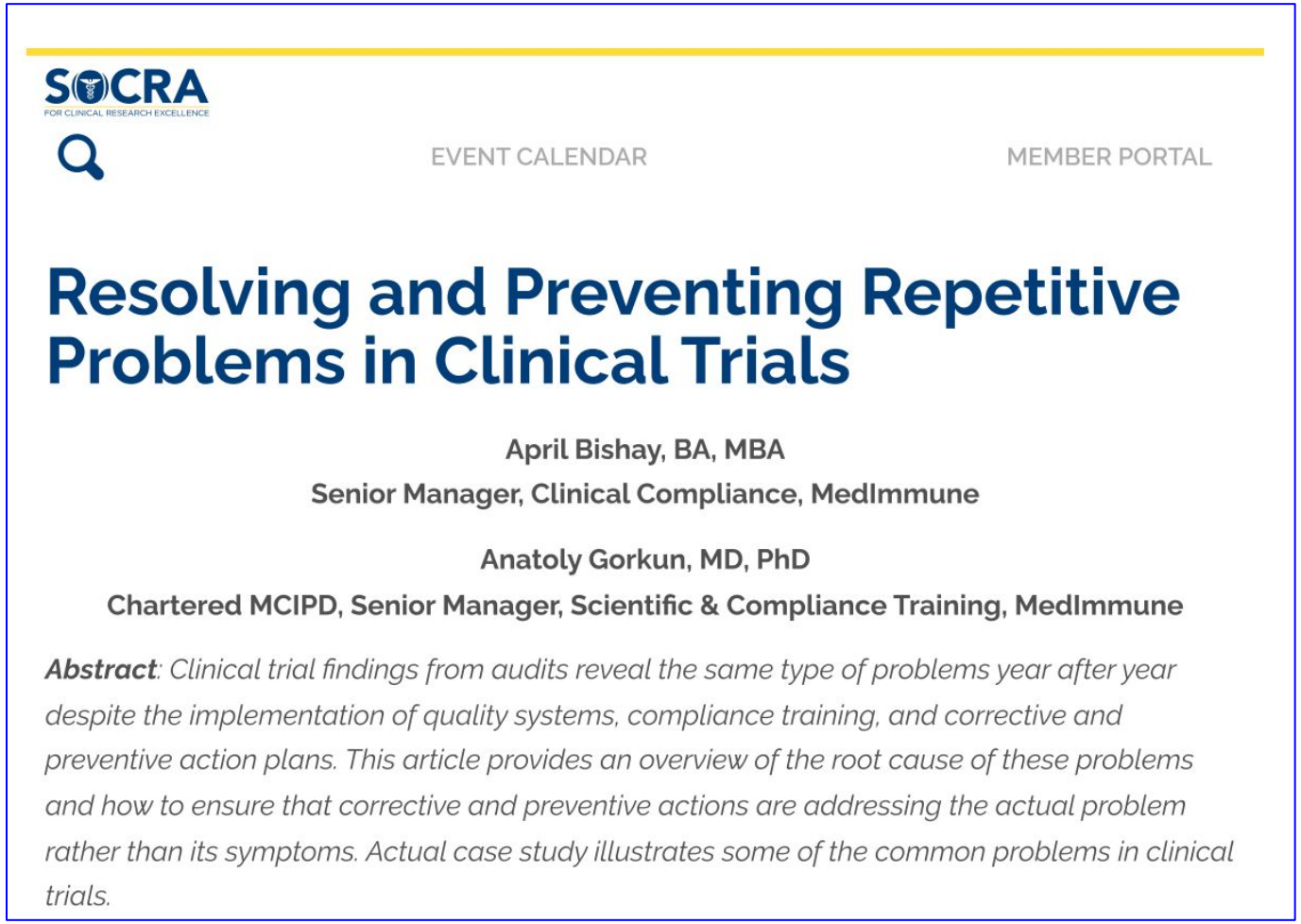
Read the Article (5-10 minutes)

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Go to the linked page at https://www.socra.org/blog/corrective-and-preventative-action/#Introduction

Read the article (9 pages)

Start with abstract, then conclusion, then tables…



SOCRA
FOR CLINICAL RESEARCH EXCELLENCE

EVENT CALENDAR MEMBER PORTAL

Resolving and Preventing Repetitive Problems in Clinical Trials

April Bishay, BA, MBA
Senior Manager, Clinical Compliance, MedImmune

Anatoly Gorkun, MD, PhD
Chartered MCIPD, Senior Manager, Scientific & Compliance Training, MedImmune

Abstract: *Clinical trial findings from audits reveal the same type of problems year after year despite the implementation of quality systems, compliance training, and corrective and preventive action plans. This article provides an overview of the root cause of these problems and how to ensure that corrective and preventive actions are addressing the actual problem rather than its symptoms. Actual case study illustrates some of the common problems in clinical trials.*

Regulatory Responsibilities

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Sponsor Regulatory Binder

- Protocol development
- Investigator's Brochure
- Regulatory Plan
- Data Management Plan
- Statistical Analysis Plan
- Monitoring Plan
- Site Management Records
  - Site by Site: feasibility, initiation, interim monitoring, close out, final study report
- Reports and publications

Site Regulatory Binder

- **PI**: CV, Medical License, 1572
- **Trial**: Protocol, Informed Consent Form (ICF) & amendments
- **IRB**: Submissions, changes, approvals (Stamped and dated)
- **Data Management**: Case Report Form (annotation and cleaning instructions), Query List and Metrics, Reports
- **Financial**: Contracts, agreements, invoices, payments
- **Staffing**: Delegation of authority logs, signature/access log, training records

Relevant Standard/Regulations

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- ISO 14155:2020 GCP for Medical Devices
- 21CFR812 Investigational Device Exemption (IDE)
- 21CFR11 Electronic Records/Electronic Signatures
- 21CFR50 Protection of Human Subjects
- 21CFR54 Financial Disclosure by Clinical Investigators
- 21CFR56 Institutional Review Boards
- 45CFR46 Subpart A The Common Rule
- Guidance documents and FDA Information Sheets

Regulatory Quality Team members should understand regulatory requirements in order to QC/QA study regulatory compliance

ISO14155 Requirements

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- **Protect** study subjects (rights, safety, well being!)
- Conduct a "credible" clinical trial with **data integrity**
- Be **RESPONSIBLE** (sponsor, investigator, study staff!)
- Know the **rules** (who does what and why?)

Integrates all ICH E6 (R2) principles from drug trials

Released as an FDA Recognized Consensus Standard
https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfStandards/detail.cfm?standard__identification_no=41711

Click the link and note the US FDA regulations

Aligns with EU Reg 2017/745 EU Medical Device regulation

From a regulatory perspective, the **Quality Team** should ensure the international standard is being followed…

Follow ISO 14155:2020

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- **Ethics**
- Planning
- Conduct
- Close Out/Reporting
- **Responsibilities**
- **Checklists**

ISO14155 Version History

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

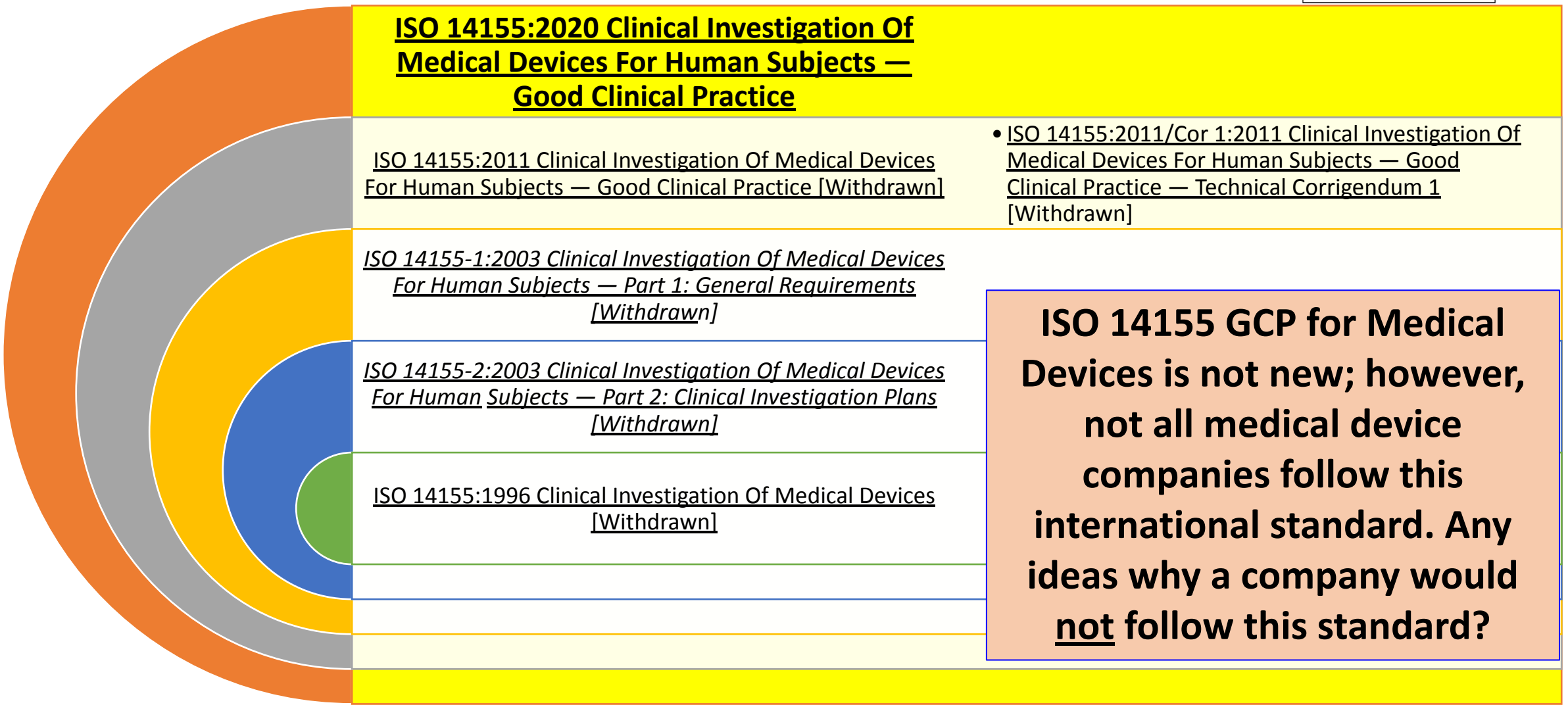
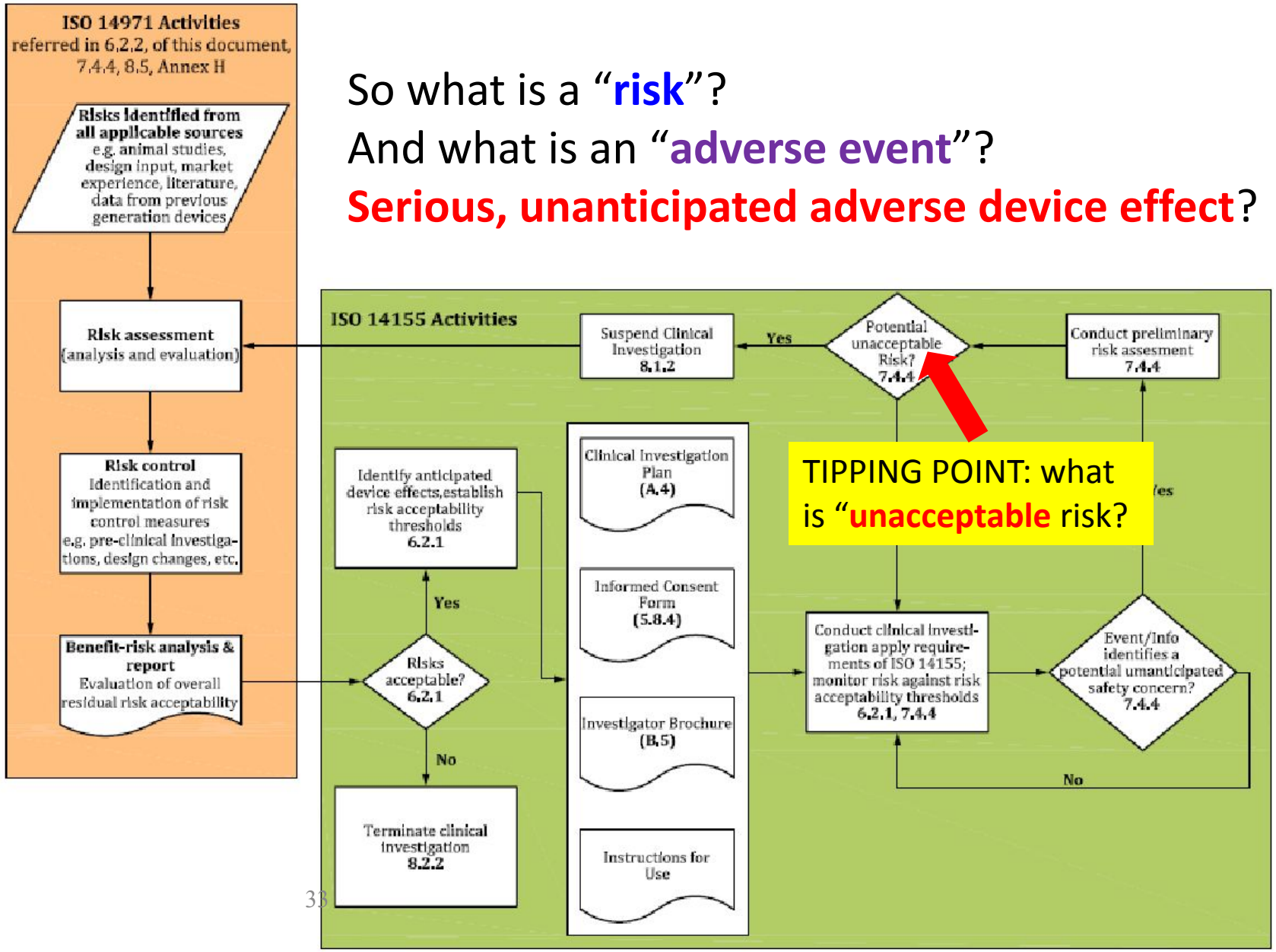


Fig. H-1: ISO 14971 includes 14155

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

So what is a "**risk**"?
And what is an "**adverse event**"?
Serious, unanticipated adverse device effect?



From a regulatory perspective, the **Quality Team** should ensure international standards are being followed…

CAPA & RCA for noncompliance!

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Corrective and Preventive Action (CAPA) - 7 steps

1) ***Identify*** *deviation*
2) ***Evaluate*** *facts, risks, impacts*
3) ***Investigate*** *(do RCA)*
4) ***Analyze*** *root cause/s*
5) ***Plan*** *Action*
6) ***Implement*** *Action*
7) ***Follow up***

Root Cause Analysis (RCA) - 3 Examples

1) ***5 Whys?*** *(more or less)*
2) ***Change Analysis/Event Analysis*** *(leading up to event)*
3) ***Fishbone Diagram*** *(cause and effect mapping)*

TRIAL MASTER FILE (Site)

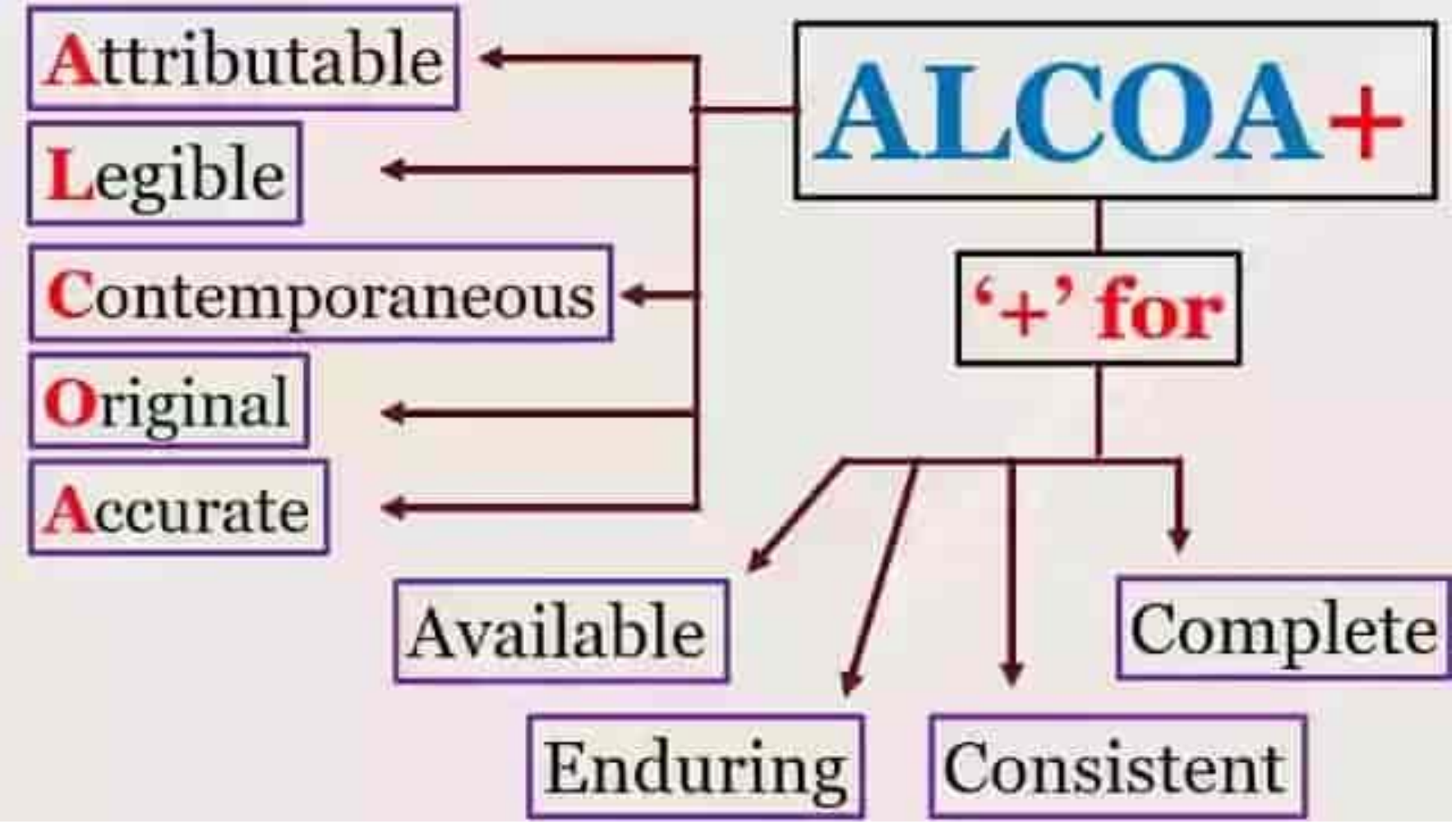
ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

1. Protocol Summary
2. Investigator Information
3. Investigational Product Documentation
4. Informed Consent Forms & Clinical Trial Agreements
5. Adverse Event Reporting Logs and Summaries
6. Case Report Forms (CRFs)
7. Source Data Verification Records
8. Drug Accountability Records
9. Lab Results and Quality Control Reports
10. Clinical Study Reports, Regulatory Submissions, and Correspondence with Health Authorities
11. Audit Trails
12. Monitoring Visit Reports
13. Training Documents
14. Electronic Data Capture Systems Validation Documents
15. Statistical Analysis Plans
16. Laboratory Certified Study Specimens

Sponsor also has:

- Design History File
- Design Control Records (21CFR820)
- Q-Sub Meeting Records
- Regulatory Submissions (PMA/510(k)/IDE)
- Clinical Development Plan

FDA Requires GDP* - all records



***Good Documentation Practices**

https://pharmaguidesop.com/2020/08/what-is-alcoa-plus-alcoa-details-alcoa-principle.html

ALCOA+ Details

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Summary of ALCOA+
Attributable - Record who wrote it and when with sign/date
Legible - Data should be readable after it is recorded
Contemporaneous - Record the data at the time it was generated (online)
Original - Data in its unaltered state
Accurate - Data reflect its actual value / trueness, free from error
Available - Available for review at any time
Enduring - Making sure records exist for the entire period
Complete – Data in complete state to avoid recreation/ manipulation
Consistent – Data in sequential manner with a sign and date. Follow GDP for consistency in documentation.

https://pharmaguidesop.com/2020/08/what-is-alcoa-plus-alcoa-details-alcoa-principle.html

ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

BEST PRACTICES

MTQ-620 / RAS-633 - Medical Device Quality & Regulatory Fundamentals

My TOP 3 GCP Best Practices

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

1. **Know your patients well, right from the start!**
   - medical and surgical history, medications past and present, disease state and progression, research concerns, interests, insights and motivations to participate in research
2. **Know your study well from all angles…**
   - protocol, CRF, IRB concerns, sponsor needs, your own capabilities within the study
3. **Be well prepared.**
   - keep your training, education and experience UP TO DATE and be sure you are paying attention to safety FIRST and efficacy at all times.

World Health Organization

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

- ❑ Principle 1: Ethical Conduct
- ❑ Principle 2: Research described in a protocol
- ❑ Principle 3: Risk Identification
- ❑ Principle 4: Benefit-Risk Assessment
- ❑ Principle 5: Review by Independent Ethics Committee/ Independent Review Board
- ❑ Principle 6: Protocol Compliance
- ❑ Principle 7: Informed Consent
- ❑ Principle 8: Continuing Review/Ongoing Benefit-Risk Assessment
- ❑ Principle 9: Investigator Qualifications
- ❑ Principle 10: Staff Qualifications
- ❑ **Principle 11: Records**
- ❑ Principle 12: Confidentiality/Privacy
- ❑ Principle 13: Good Manufacturing Practice
- ❑ **Principle 14: Quality Systems**

Quality is mentioned 110 times in this "**Handbook for Good Clinical Research Practice**"

- ✔ **Quality** standards (QC/QA/QI*)
- ✔ Highest **quality** / data integrity
- ✔ Investigational Product **Quality**
- ✔ Data/Records **Quality**
- ✔ Scientific **Quality**
- ✔ Monitoring/Auditing **Quality**
- ✔ Good Laboratory Practice **Quality**

QC=quality control; QA=quality assurance;
QI=quality improvement

https://apps.who.int/iris/bitstream/handle/10665/43392/924159392X_eng.pdf;sequence=1

GCP Best Practices

- ISO 14155
  - Medical Device GCP
- ALCOA Plus
  - FDA requires this!
- SOPs
  - Develop and Apply them
- Manage and **IMPROVE** quality
  - Coordinate regulator, sponsor, PI, site staff, IRB/IEC activities

"**In the context of a clinical trial**, **quality** may apply to **data** (e.g. data are accurate and reliable) or **processes** (e.g. compliance with the study protocol and GCP; ensuring informed consent; adequate data handling and record-keeping, etc.)."

https://apps.who.int/iris/bitstream/handle/10665/43392/924159392X_eng.pdf;sequence=1

ST. CLOUD STATE UNIVERSITY

EDUCATION FOR LIFE.

COURSE WRAP-UP

MTQ-620 / RAS-633 - Medical Device Quality & Regulatory Fundamentals

Session Agenda

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

Settle In & Speaker Introduction Steve Gompertz 9:00 – 9:15

GCP Overview Joy Frestedt9:15 – 9:35

Quality Roles in GCP Joy Frestedt 9:35 – 9:55

Regulatory Roles in GCP Joy Frestedt 9:55 – 10:15

Best Practices Joy Frestedt 10:15 – 10:30

Course Wrap-Up Steve Gompertz 10:30 – 11:00

Learning Objectives

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

After attending this course, learners should be able to:

1. Explain GCP
   a) not just what the acronym means, but
   b) how quality systems work in medical device clinical trials
2. List a few quality roles in GCP
3. List a few regulatory roles in GCP
4. Describe a few best practices for GCP QUALITY

QUIZ: WHAT DID YOU LEARN TODAY?
10 QUESTIONS – READY, SET, GO!

MTQ-620 / RAS-633 - Medical Device Quality & Regulatory Fundamentals

GCP Overview #1

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

1. What does GCP stand for?
   a) Generic Clerical Program
   b) General Contents Preview
   c) Good Clinical Practice
   d) Good Control Process

GCP Overview #2

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

2. Which International Standard provides details about Medical Device GCP?
   a) ISO 10997
   b) ISO 13485
   c) ISO 14155
   d) ISO 14971

GCP Overview #3

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

3. What are 3 differences between QC and QA?

QC=Quality Control	QA=Quality Assurance
• Quality at a given moment in time	• Quality over entire project
• Deliver the quality requested	• Process to assure quality
• Identify/react/fix defects	• Prevent/block defects/vulnerabilities
• Subset of quality activities	• Comprehensive quality system
• Monitoring, testing, reporting	• Auditing, reviewing, revising
• Performed during project	• Performed after project completed
• Manage the quality	• Verify the quality

GCP Overview #4

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

4. When running a clinical trial, ethically, what are three specific requirements assumed to be in place before starting the trial?

Running a clinical trial assumes certain things about the company running the trial:

1. **QMS** is in place (ISO 13485, 21CFR820 QSR, ISO 14971 risk management, etc.)
2. **cGMP** has produced a safe-enough and effective-enough device for use in a human
3. **GCP** requires a high quality, **ethical** and scientifically sound treatment for each patient

Quality Roles in GCP #5

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

5. Who sets the minimum quality at the site and conducts the trial overall?

The PI (Principal Investigator)

Quality Roles in GCP #7

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

7. What are some differences between a CRC and CRA?

Clinical Research Coordinator (CRC)

- Site coordinator
- Day-to-day operations
- Patient visits, data records
- Keeps track of visits/data
- Reports safety and efficacy concerns

Clinical Research Associate (CRA)

- Study monitor
- Initiation, interim, close out visits
- Issues queries for correction
- Clarifies patient info/data
- Reports site problems/closes sites

Regulatory Roles in GCP #8

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

8. What do the terms CAPA and RCA mean and when are these tools used by the Quality Team Members?

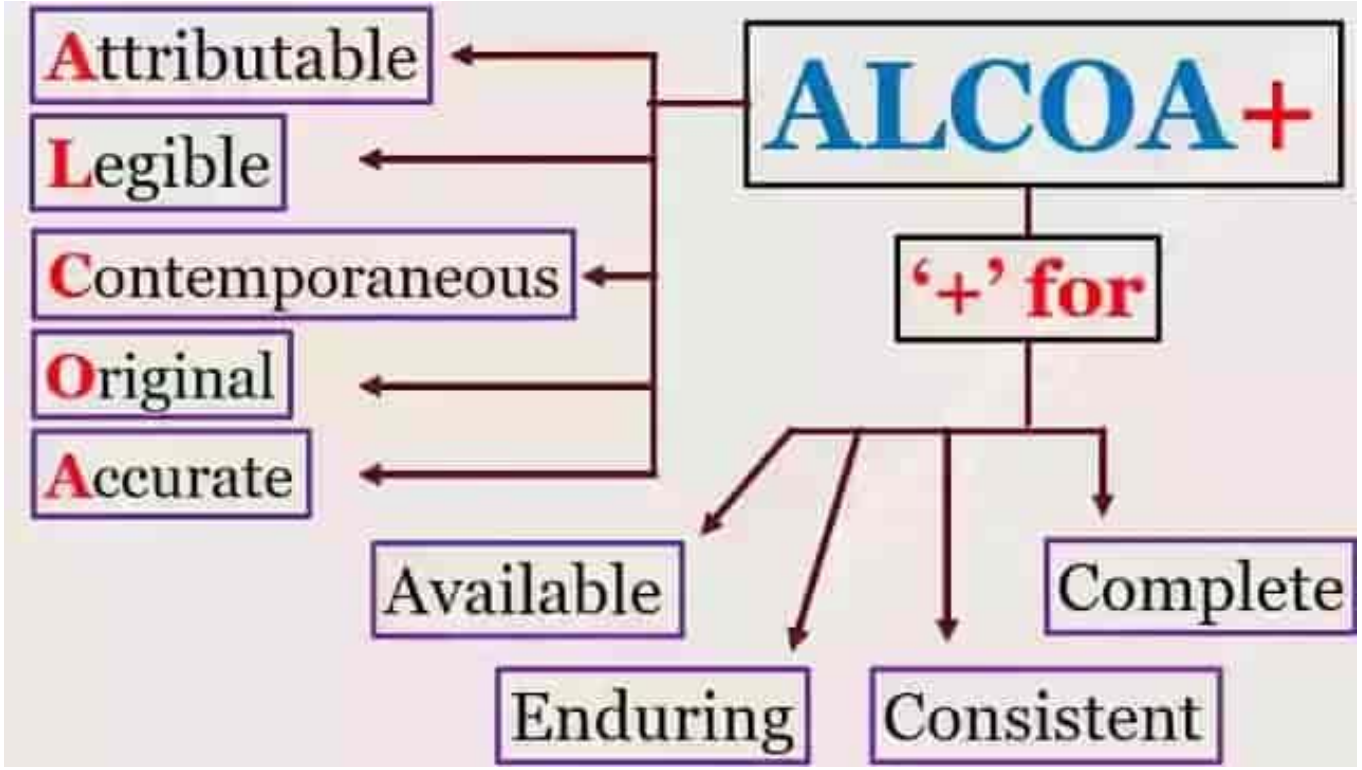
Corrective and Preventive Action (CAPA) and Root Cause Analysis (RCA) are used for NONCOMPLIANCE (e.g., when ISO 14155 mistakes are made)

Regulatory Roles in GCP #9

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

9. What must be checked in each record for ALCOA+ compliance?

Each Record must be:



Best Practices #10

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

10. What are my top 3 best practices for GCP quality?

1. **Know your patients well, right from the start!**
   medical and surgical history, medications past and present, disease state and progression, research concerns, interests, insights and motivations to participate in research
2. **Know your study well from all angles…**
   protocol, CRF, IRB concerns, sponsor needs, your own capabilities within the study
3. **Be well prepared.**
   keep your training, education and experience UP TO DATE and be sure you are paying attention to safety FIRST and efficacy at all times.

Best Practices #10

ST. CLOUD STATE UNIVERSITY
EDUCATION FOR LIFE.

10. In the context of a clinical trial, what does quality apply to?

"**In the context of a clinical trial**, **quality** may apply to **data** (e.g. data are accurate and reliable) or **processes** (e.g. compliance with the study protocol and GCP; ensuring informed consent; adequate data handling and record-keeping, etc.)."


UNLEASH PASSION
ST. CLOUD STATE
UNIVERSITY
Thank you for attending!