CRF Development for Regulatory and Institutional Compliance

Supporting Monitoring/Auditing, Inspection Readiness and Reporting

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Learning Objectives

At the end of this session participants will be able to:

- Explain how CRFs support participant safety and data integrity.
- Describe how CRF development facilitates monitoring and auditing.
- Recognize how CRFs support regulatory and institutional reporting.
- Understand how CRF design contributes to inspection readiness.
- Apply best practices that improve documentation quality and compliance.

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What is a CRF

- **ICH GCP E6(R3) defines a Case Report Form as** *"a data acquisition tool designed to record protocol-required information to be reported by the investigator to the sponsor on each trial participant."*

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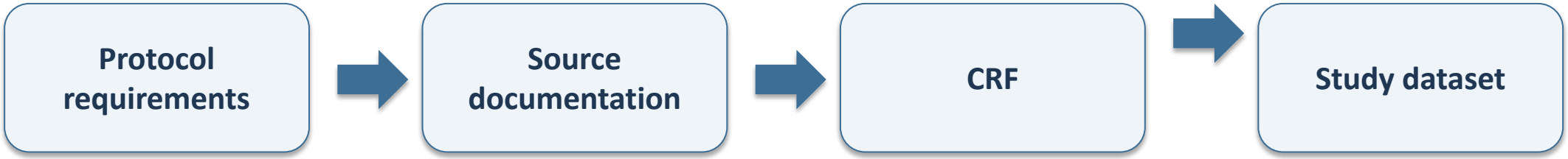
What are CRFs

- Standardized forms used to collect study data tailored to match the protocol objectives.
- Creates a structured, traceable connection between the protocol and the study's final data.



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Why CRFs Matter

CRFs turn study-specific information from dispersed source records into structured, accessible data that supports reliable study conduct and trustworthy results.

- **Standardize Data Collection** — Consistent capture across participants, visits, and sites.
- **Support Safety & Data Quality** — Critical information is visible, reviewable, and actionable to investigators, monitors and independent safety entities. Supports timely assessment and follow up.
- **Enable Oversight & Reporting** — Structured data supports compliance, efficient monitoring, accurate analysis, and reliable and timely institutional and regulatory reporting.
- **Create a Traceable Study Record** — Connect protocol requirements to collected data, changes, analyses, and study conclusions.

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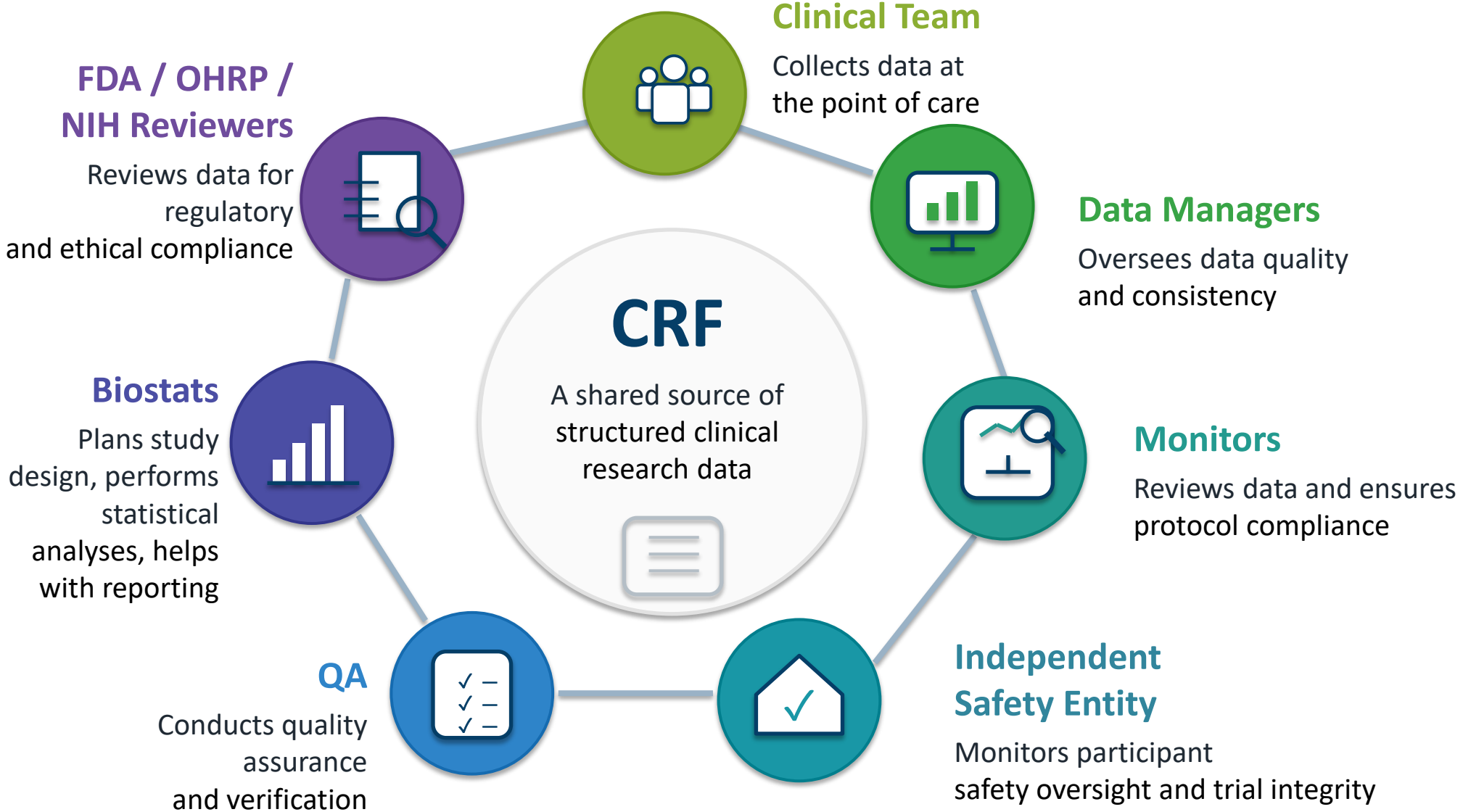
Who uses the CRF?



Key Principles of CRF Design

Protocol-driven – Collect only critical data needed to meet participant safety oversight, study objectives and regulatory requirements.

Clear & simple – Should be easy to read and fill out. Avoid unnecessary complexity. Use concise questions, logical flow, and unambiguous instructions.

Consistent – Standardize terminology, formats, units, and response options.

Fit for purpose – Capture the right level of detail without unnecessary data.

User-friendly – The form should be intuitive. Design with site workflow and ease of data entry in mind.

Built-in quality controls – Use edit checks, required fields, controlled responses, and conditional logic to prevent errors and improve data quality. Include audit trails.

Team Approach – Utilizing a multi-disciplinary team to ensure CRFs meet medical, statistical, technological, and regulatory requirements.

How CRFs Support Participant Safety

CRFs turn safety observations into structured, reviewable data that support timely decisions and ongoing safety monitoring.

1 DETECT & ASSESS

Capture abnormal labs, symptoms, severity, timing, and relatedness.

2 UNDERSTAND & ACT

Use history, medications, and intervention data to assess causes and document actions.

3 FOLLOW UP & REPORT

Track status and results over time and support required safety reporting.

4 MONITOR THE STUDY

Aggregate CRF data to identify patterns and potential safety signals.

STRUCTURED › REVIEWABLE › ACTIONABLE

Why the medical record alone isn't enough

Medical record	**CRF**
Primarily documents clinical care	Captures **protocol-defined research data**
Information may appear in notes, labs, medication lists, etc.	Places required data into **standardized fields**
Terminology and documentation can vary among clinicians/sites	Uses **consistent definitions and response options**
Shows what happened clinically	Adds **study-specific assessments**
Primarily organized around an individual patient	Allows data to be evaluated **across participants, sites and time**
Not necessarily structured for study analysis	Produces structured data for **monitoring, analysis, and reporting**

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Can’t Count on just the Medical Record

The medical record and the CRF serve different purposes.

- The medical record **tells the clinical story of an individual participant** and **provides the source evidence for research data**. The CRFs **organize and transform** protocol-required elements of **that story into standardized research data** that can be consistently evaluated, monitored, compared, analyzed, and reported across participants, sites and time.

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How CRF Development Facilitates Monitoring & Auditing

Monitoring goes beyond verifying that data exists—it evaluates whether the study is being conducted according to the protocol and GCP.

- CRFs make monitoring and auditing more **efficient and focused** by providing a **clear picture of study conduct and data quality**, while directing attention to data critical to **participant safety, protocol compliance, and study endpoints**.

Well-Designed CRFs Make Visible	Enabling Monitors & Auditors to Evaluate
Protocol-required activities — visits, procedures, assessments, interventions, and deviations	**Protocol compliance** — Were required activities completed and deviations appropriately identified and managed?
Critical and safety data — including adverse events and study endpoints	**Participant safety & critical endpoints** — Were important events captured, followed up, and reported appropriately?
Data quality & consistency — missing, inconsistent, or queried data across participants, visits, and sites	**Data quality & study conduct** — Are data complete and consistent, and are site processes adequate?

Regulatory & Institutional Reporting

CRFs capture the structured, traceable data needed to produce accurate and reliable study reports and regulatory submissions.

Reporting requirements should drive CRF design to ensure that data necessary for oversight and reporting are captured from the start.

Safety & Oversight	Study & Regulatory Reporting	Dissemination & Data Sharing
• AE/SAE and safety reporting • IRB/institutional oversight • Data and Safety Monitoring reports	• NIH progress reports • ClinicalTrials.gov results • Statistical analyses and final study reports	• Publications • Data sharing

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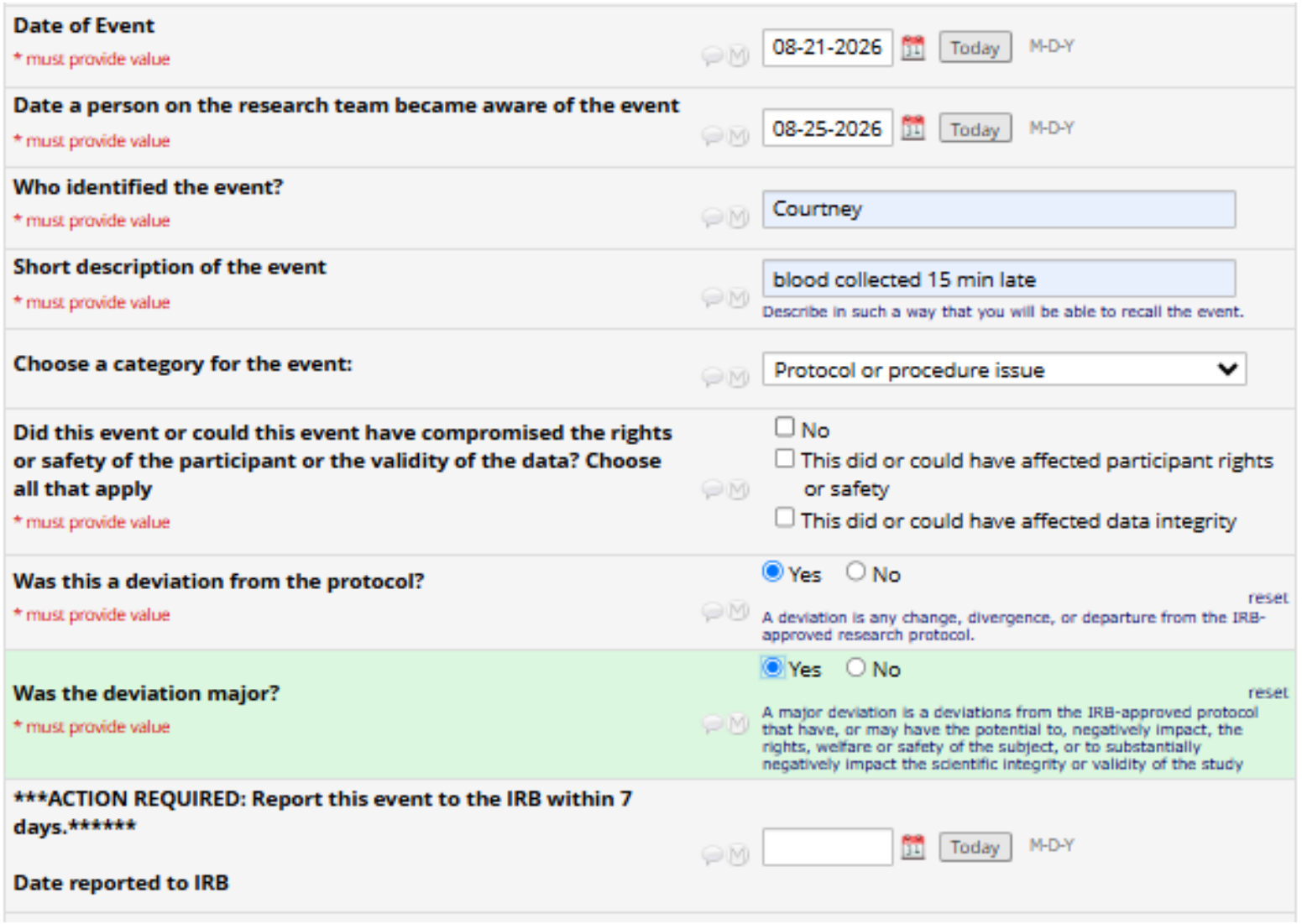
Regulatory & Institutional Reporting



Date of Event
* must provide value
08-21-2026 Today M-D-Y

Date a person on the research team became aware of the event
* must provide value
08-25-2026 Today M-D-Y

Who identified the event?
* must provide value
Courtney

Short description of the event
* must provide value
blood collected 15 min late
Describe in such a way that you will be able to recall the event.

Choose a category for the event:
Protocol or procedure issue

Did this event or could this event have compromised the rights or safety of the participant or the validity of the data? Choose all that apply
* must provide value
- [ ] No
- [ ] This did or could have affected participant rights or safety
- [ ] This did or could have affected data integrity

Was this a deviation from the protocol?
* must provide value
(•) Yes ( ) No reset
A deviation is any change, divergence, or departure from the IRB-approved research protocol.

Was the deviation major?
* must provide value
(•) Yes ( ) No reset
A major deviation is a deviations from the IRB-approved protocol that have, or may have the potential to, negatively impact, the rights, welfare or safety of the subject, or to substantially negatively impact the scientific integrity or validity of the study

*****ACTION REQUIRED: Report this event to the IRB within 7 days.*******

Date reported to IRB
Today M-D-Y

- **Example:** NIH **Policy 3014-801, Reporting Research Events**, establishes requirements for reporting research-related events to the NIH IRB. Events meeting expedited reporting are submitted through **PROTECT using a Reportable New Information (RNI) form**

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Regulatory & Institutional Reporting

Is this event UNEXPECTED? * must provide value	◉ Yes ○ No reset Unexpected means not expected or previously observed, or is not consistent in nature, severity, or frequency with existing risk information, such as in the investigator's brochure, device manual, research protocol, consent form, or other available information
Is this event related or possibly related to participation in the research? * must provide value	◉ Yes ○ No reset
Does this event suggest that the research places participants or others at a greater risk of harm?	◉ Yes ○ No reset Suggests that the research places subjects, or others (which may include research staff, family members or other individuals not directly participating in the research) at a greater risk of harm (including physical, psychological, economic, or social harm) related to the research than was previously known or expected.
*****ACTION REQUIRED: This is a UP** ****Report this event to the IRB within 7 days. If this is a death (related or possibly related), report to the IRB within 24 hours.****** **Date reported to IRB:**	Today M-D-Y
Would this event constitute new information that might affect the willingness of a participant to enroll or remain in the study? * must provide value	○ Yes ○ No reset
Does the event reflect NON-COMPLIANCE? * must provide value	○ Yes ○ No reset Non-compliance means failure of investigator(s) to follow the applicable laws, regulations, or institutional policies governing the protection of human subjects in research, or the requirements or determinations of the IRB, whether intentional or not

Inspection Readiness

CRFs support inspection readiness by making clinical trial data **complete, consistent, traceable, and easy to reconstruct**. They **don't merely collect data; they help preserve evidence of how the study was conducted and how the resulting data can be trusted.**

COMPLETE
- Protocol-required data captured

CONSISTENT
- Standardized collection

TRACEABLE
- Source, CRF, changes & queries connected

RECONSTRUCTABLE
- Study conduct and final data can be understood

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Inspection Ready

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CRFs: More Than Data Collection

CRF design isn't an isolated data-management activity, good CRF design helps:

Good CRF design starts with the protocol and results in data that are usable, traceable, and defensible.

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Resources

International Council for Harmonisation (ICH). *ICH E6(R3) Guideline for Good Clinical Practice.* Final Guideline, 6 January 2025.

Official ICH E6(R3) Good Clinical Practice Guideline (PDF)

Clinical Data Interchange Standards Consortium (CDISC). *Clinical Data Acquisition Standards Harmonization Implementation Guide (CDASHIG), Version 2.1.* Section 4.2: CRF Design Best Practices.

CDISC CDASHIG v2.1 – CRF Design Best Practices

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