Quality tolerance limit and duplicated patient investigation in clinical trials

SCIENCE GROUP, FEB 2024

Executive Summary

*Research company aims to provide **clear guidelines and standards** for managing the **quality of clinical trials worldwide**, focusing on different types of trials and potential risks.*

- Maintaining data integrity and quality **is crucial** for meeting the goals of clinical trials **on time**.

  Quality Tolerance Limits (QTL) (also called 'acceptable ranges') are **essential** for making sure the **data** collected in clinical trials **is reliable and trustworthy**.

  Following QTL guidelines, like those in ICH E6 R2, helps **keeping data quality high**, ensures compliance with regulations, and **protects patient safety and rights**.

- Determining QTL thresholds and expected distributions **requires careful analysis** using advanced statistical methods (methods, which in turn require, in order to achieve an acceptable level of accuracy, the analysis of a **large amount of data**).

- Properly implementing and keeping an eye on QTL helps clinical trials **succeed and leads to better medical treatments**.

How does the Research Company support Clinical Trial management?

01

Compliance Advancement

- Enhanced protocol compliance
- Reduction in major and critical protocol violations
- Decreased percentage of screen failure patients
- Minimized missing Primary and Secondary Endpoint data
- Improved regulatory compliance
- Decreased audit & inspection findings

02

Data Quality and Integrity

- Enhanced data quality
- Achieving statistical significance
- Improved control over data
- Reduction in database re-openings compared to historical data

03

Safety Enhancement

- Enhanced subject safety measures
- Improved consistency in Adverse Events reporting across sites
- Facilitates near real-time Medical Monitoring (time trends and outliers)

04

Time Efficiency

- Accelerated study conduct timelines
- Reduced time from last subject last visit to database lock
- Efficient site closure for non-performing sites
- Enhanced predictability of study enrollment and resource planning for database closure
- Improved planning of interim analyses

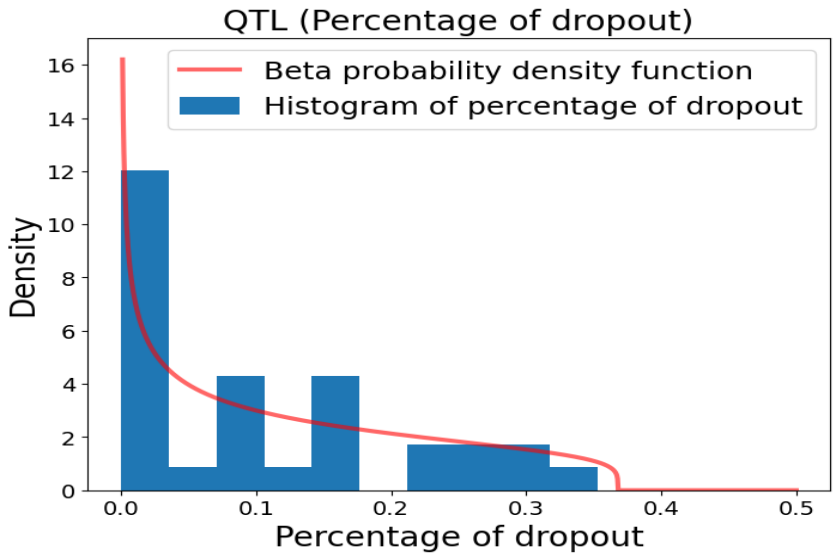
05

Cost Optimization

Overall cost reduction through:

- Optimization of monitoring visits
- Minimization of potential hazards and risks

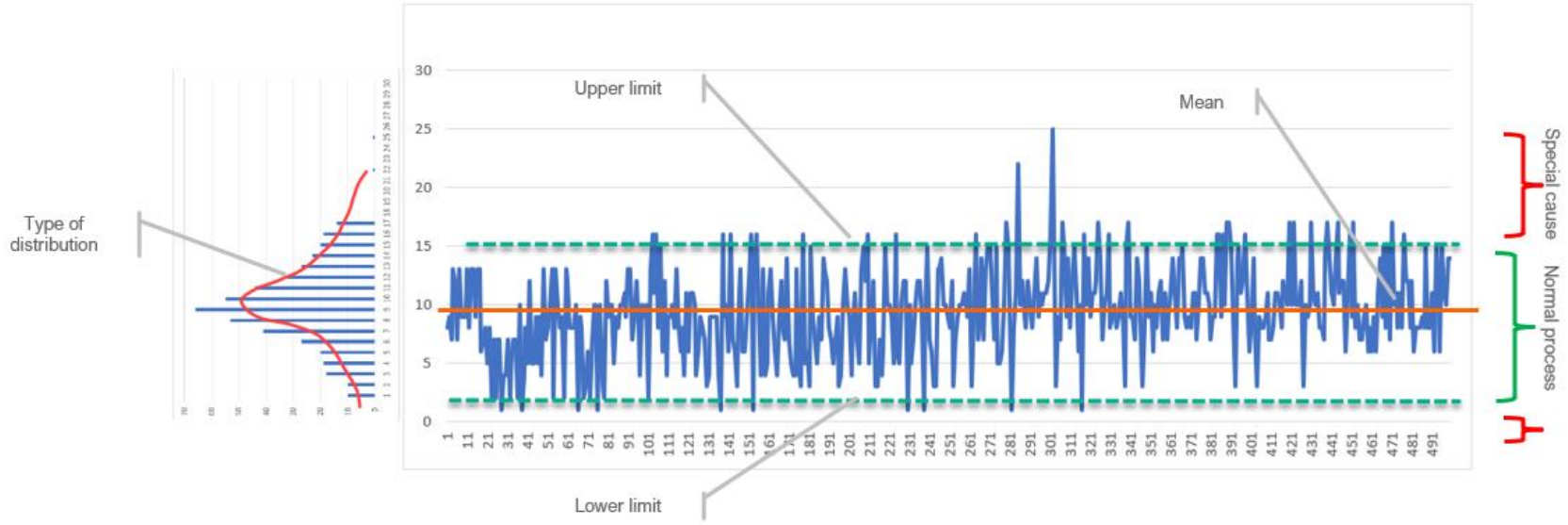
What are Quality Tolerance Limits (QTL)?



- *Percentage of participants lost to follow up must not exceed 3% after 5 years in a study (outcome studies like in oncology or cardiovascular events studies)*
- *Percentage of adverse events that should have been reported as serious adverse events based on the MedDRA important medical event list must not exceed 0.2% of all SAEs*

- Quality Tolerance Limits (QTL) refer to predefined acceptable ranges for data quality metrics in clinical trials.
- These metrics may include parameters like completeness, accuracy, and consistency of data collected during the trial.
- QTL help maintain data integrity and reliability by setting boundaries within which data should fall to be considered valid.

Importance of QTL in Clinical Trials



- Ensures Data Integrity: QTL help ensure that the data collected during a clinical trial is accurate, reliable, and suitable for analysis.
- Maintains Regulatory Compliance: Adhering to QTL guidelines, such as those outlined in ICH E6 R2 ('acceptable ranges', in R3 draft), helps sponsors and researchers comply with regulatory requirements.
- Protects Patient Safety: By maintaining high data quality standards, QTL contribute to the safety of patients enrolled in clinical trials by minimizing errors and inaccuracies.

Patient duplication data in Clinical Trials

Impacts on Data Analysis: Duplicate patient data can skew statistical analyses and lead to erroneous conclusions. For example, if the same patient is counted multiple times, it can inflate sample sizes and affect the calculation of treatment effects or adverse events.

Data Quality Checks: Establishing robust data quality checks and validation procedures can help identify inconsistencies and discrepancies in patient data. Automated algorithms processes can be employed to flag potential duplicate entries based on matching criteria such as demographic information, vital signs and study identifiers.

Data Integration Technologies: Utilizing advanced data integration technologies, such as data matching algorithms and record linkage methods, can facilitate the identification and resolution of duplicate patient records across disparate data sources. These technologies can help streamline the integration process while minimizing the risk of duplication errors.

BACKUP

ICH harmonisation for better health

ICH E6(R2) Addendum

Overview of Addendum Content (continued)

Sponsor Responsibilities

- Quality Management (section 5.0).
  - Implement a system to manage quality throughout all stages of the trial process.
  - Focus on trial activities essential to ensuring human subject protection and the reliability of trial results.
  - Use methods to assure and control the quality of the trial that are proportionate to the risks.
  - Avoid unnecessary complexity, procedures, and data collection.

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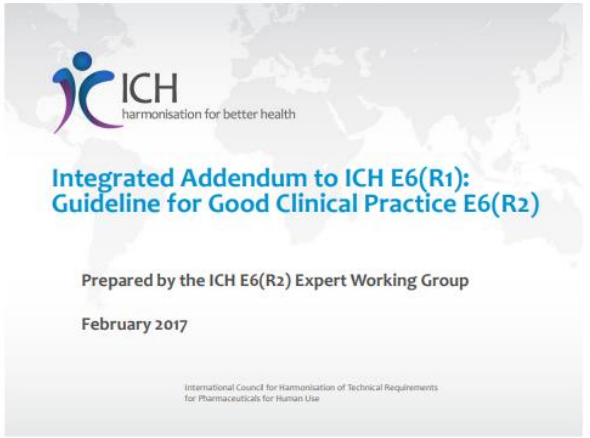

Overview of Addendum Content (continued)

Sponsor Responsibilities (continued)

- Quality Management (continued)
  - Use a risk-based approach to the quality management system.
    - Identify critical processes and data (section 5.0.1)
    - Identify risks to critical trial processes and data (5.0.2)
    - Evaluate risks (5.0.3)
    - Control risks (5.0.4)
    - Communicate risks (5.0.5)
    - Review risks (5.0.6)
    - Report risks (5.0.7)

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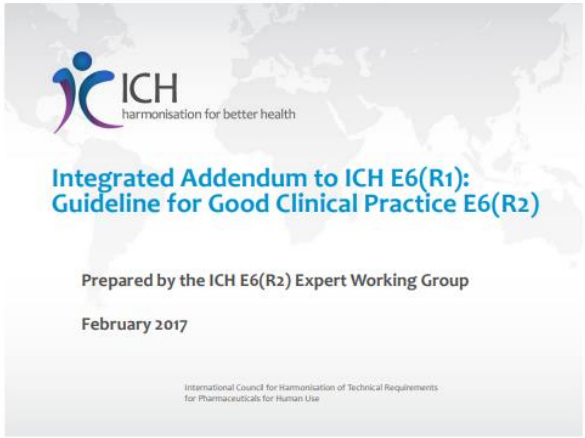
ICH harmonisation for better health

Integrated Addendum to ICH E6(R1): Guideline for Good Clinical Practice E6(R2)

Prepared by the ICH E6(R2) Expert Working Group

February 2017

International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use

5.7 Study Data (continued)

- Study data should be of sufficient quality to address the objectives of the study and, in interventional studies, to monitor participant safety.
- Data quality attributes include consistency (uniformity of ascertainment over time), accuracy (correctness of collection, transmission, and processing), and completeness (lack of missing information).
- There are additional considerations with secondary data use.