Clinical Trials in Crisis

Numerous changes in the pharmaceutical industry have affected the nature of clinical trials, which in turn have led to the evolution of systems used for the supply of clinical trial materials.

Today, both large biopharmaceutical companies and small research organizations have to deal with the logistics of shipments and distribution, and reduce errors and delays because of the global nature of drug development. This requires a coordinated effort, from the planning of clinical trials to the management of clinical supplies, and a comprehensive understanding of the entire supply chain, including regulation and market issues.

In the past, the study of clinical trial logistics has been centered on the traditional model of supply chain management. However, with the increasing complexity of clinical trials and the need for faster and more efficient delivery of products, there is a growing recognition of the importance of a more integrated approach to clinical trial logistics.

Today’s clinical trial logistics are becoming increasingly important and complex, with a growing number of trials being conducted across the globe. In order to demonstrate improved efficiency and cost-effectiveness, key partners must work together to improve the supply chain. This includes not only the pharmaceutical companies but also the clinical investigators and sponsors, as well as regulatory agencies and other stakeholders.

The evolution of clinical trial logistics is driven by the need to improve patient safety, reduce costs, and increase the speed and efficiency of clinical trials. As a result, there is a growing recognition of the importance of a more integrated approach to clinical trial logistics, one that takes into account the unique needs and challenges of each trial.

In conclusion, the evolution of clinical trial logistics is a complex and ongoing process, driven by the need to improve patient safety, reduce costs, and increase the speed and efficiency of clinical trials. This requires a coordinated effort, from the planning of clinical trials to the management of clinical supplies, and a comprehensive understanding of the entire supply chain, including regulation and market issues.
Addressing This Need

Public-Private Partnership
Co-founded by Duke University & FDA
Involves all stakeholders
80+ members

MISSION: To develop and drive adoption of practices that will increase the quality and efficiency of clinical trials
Multi-Stakeholder

Clinical Investigators

Patients, Caregivers & Patient Advocacy Groups

Academia

Trade & Professional Orgs

IRBs

Industry (pharma, bio, device, CRO, & tech)

Government & Regulatory Agencies

Everyone Sustained Researchable Trials
CTTI Membership

*Version: Sept. 26, 2017*
Evidence-Based

We use quantitative & qualitative research methods, selecting those best aligned with each project’s objectives, to:

- Identify/describe “what is going on” to gain a better understanding of a particular phenomenon
- Move beyond individual views to a more complete and objective understanding of the disincentives and motivators for change

Equipped with data, we then challenge assumptions, identify roadblocks, build tools and develop recommendations to change the way people think about and conduct clinical trials.
Real-World Impact within Organizations

CTTI’s Central IRB tools & recommendations are used by:
- Celgene Corporation
- National Institute of Neurological Disorders and Stroke (NIH)
- Northwell Health

CTTI’s Quality by Design framework is used by:
- AstraZeneca
- DCRI
- The Medicines Company
- PCORNET
- Pfizer
- Seattle Genetics
- Target Health Inc
- University of Oxford
CTTI and its work have been cited in:

- NIH Policy
- Several FDA guidance documents
- An EMA reflection paper
- HR 21st Century Cures & corresponding Senate effort

**Draft NIH Policy on the Use of a Single Institutional Review Board (sIRB) for Multi-Site Research**

- NIH’s proposed a policy that NIH funded institution will be expected to use a single IRB of record for domestic sites of multi-site studies funded by NIH whether supported through grants or contracts (as well as the NIH intramural program).
- The goal of the proposed policy is to enhance and streamline the process of IRB review and reduce administrative burden so that research can proceed efficiently without compromising ethical principles and protections.
- Compliance with this Policy will be a term and condition in the Notice of Award and a contract requirement in the Contract Award. Some exceptions will be permitted on a case-by-case basis.
CTTI Projects
Project Methodology

1. **State Problem**
2. **Gather Evidence**
3. **Explore Results**
4. **Finalize Solutions**
5. **Drive Adoption**

**Identify Research Impediments**
- Issue Statement & Project Plan
- Literature Reviews, Surveys, & Interviews
- Team Meetings
- Team, Expert, & Ad Hoc Committee Meetings
- Pilot Studies, Measure Impact, & Implementation

**Identify Gaps/Barrriers**

**Analyze & Interpret Findings**

**Develop Recommendations/Tools**

**Disseminate & Implement**

**Multi-Stakeholder Engagement**

**Communications**
# Project Portfolio

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Quality by Design: QbD Defined

“Quality” in clinical trials is defined as the absence of errors that matter...

...focusing effort on those “errors that matter” for the success of the clinical trial...

...taking action to prevent important risks to these critical factors from negatively impacting outcomes...

Understanding what data and processes underpin a successful trial is essential to subsequently identifying and managing important and likely risks to improve quality and outcomes for clinical trials.
QbD Implementation: Plan, Do, Check, Act

Build/plan quality into clinical trials from the beginning, focusing on what matters most

PLAN

Systematically drive remediation and learning

ACT

DO
Implement study risk management strategies

CHECK
Monitor leading indicators of quality in the study
QbD Recommendations

“Quality” is defined as the absence of errors that matter to decision making—that is, errors which have a meaningful impact on the safety of trial participants or credibility of the results (and thereby the care of future patients)

- Create a culture that values and rewards critical thinking and open dialogue about quality, and that goes beyond sole reliance on tools and checklists
- Focus effort on activities that are essential to the credibility of the study outcomes
- Involve the broad range of stakeholders in protocol development and discussions around study quality
- Prospectively identify and periodically review the critical to quality factors
Investigator Community: Characteristics of “One-and-Done” Investigators

- Time to lead trial takes away from other necessary activities
  - Long work hours
  - Unpredictable work hours
  - Trial time makes it difficult to devote time to:
    - Clinical and non-clinical activities
    - Activities fostering academic promotion

- Too much time required to lead trial
  - Amount of time to implement trial in general
  - Time required by investigator to support trial and staff
  - Amount of time required by staff to support trial
  - Amount of time required to prepare for trial set up

- Burden of data and safety reporting
  - Amount
  - Method
  - Frequency

- Dissatisfaction with trial finance
  - Sponsor/site contract negotiations
  - Sponsor/site budget negotiations
  - Final contract
  - Final site budget
  - Schedule of site payments

**Surprise Finding:** 44% of “one and done” investigators wanted to conduct more trials
Investigator Community: Characteristics of Successful Active Investigators

- Sufficient and well-trained staff
- Strong commitment and work ethic
- Institutional support
- Ability to recruit patients
- Business knowledge and experience
- Strong reputation
- Ability to network
- Ability to be realistic when selecting protocols/recruitment
Investigator Community Recommendations Overview

- Develop site-based research infrastructure and staff
- Optimize trial execution and conduct
- Improve site budget and contract negotiations
- Identify additional trial opportunities for interested investigators
Investigator Qualification

Purpose

To critically evaluate current approaches to investigator qualification, including GCP training, and issue recommendations on efficient and effective methods for investigators to become qualified to conduct clinical trials.
CTTI’s Approach to Expert Meetings

- Everyone participate, no one dominate
- Disagree without being disagreeable. Stay open to new ways of doing things
- Respect each others’ thinking and value their contributions
- Articulate hidden assumptions
- Listen for the future to emerge
THANK YOU.

www.ctti-clinicaltrials.org