CLINICAL TRIALS TRANSFORMATION INITIATIVE

BUILDING THE NEXT GENERATION OF CLINICAL TRIALS

The 21st Century Cures Act (Cures Act), the Prescription Drug User Fee Act (PDUFA VI), and the FDA Reauthorization Act of 2017 (FDARA) provide the framework for accelerating medical product development. CTTI's work aligns with these laws, focuses on finding solutions, and provides pathways for adapting to new requirements and conducting higher quality, more efficient clinical trials.

TOPIC	CTTI SOLUTION	CURES ACT	PDUFA VI	FDARA
Driving the Use of Real World Evidence	CTTI is diving deep into the use of real world data sources—including EHRs and claims—and how they can be incorporated into randomized controlled trials (RCTs) to help produce **RWE**. Forthcoming recommendations will help set the foundation for using RWE to improve trial planning, recruitment, and conduct. Additionally, CTTI is co-leading a proof-of-concept study to assess the feasibilty of using the **FDA Sentinel System** infrastructure to conduct randomized clinical trials. Successful completion will set the stage for future large, cost-efficient, and pragmatic clinical trials in a nationwide patient cohort. CTTI also created recommendations on how to assess and design **Registries** so that the data can meet expectations for the FDA review of new products.	TITLE III—DEVELOPMENT Subtitle C—Modern Trial Design and Evidence Development Sec. 3022.	Section I.I.6: Enhancing Use of Real World Evidence for Use in Regulatory Decision-Making	TITLE VII—DEVICE INSPECTIONS AND REGULATORY IMPROVEMENTS—Section 708—Device Pilot Projects Title IX—ADDITIONAL PROVISIONS—Section 901 (c) and (d)—Technical Corrections Funding for the development of the National Evaluation System for health Technology (NEST

Including Patients as Partners in Clinical Trials	Nearly every CTTI recommendation encourages patient engagement in protocol design and trial conduct. In particular, our **Patient Groups & Clinical Trials** recommendations outline how to engage patients early and often, as well as the **financial value** of doing so. This concept is also emphasized in our work on **Quality by Design**, **Mobile Clinical Trials**, **Real World Evidence** (RWE), **Patient Engagement Collaborative**, and many other areas.	TITLE III—DEVELOPMENT Subtitle A—Patient-Focused Drug Development	Section I.J.1: Enhancing the Voice of Patient's Voice in Drug Development and Decision-making Section I.J.2: Enhancing Benefit-Risk Assessment in Regulatory Decision-Making	TITLE VI—REAUTHORIZATION AND IMPROVEMENTS RELATED TO DRUGS—Section 605—Patient Experience Data
Advancing Pediatric Trials	Research sponsors, investigators, and site staff can use CTTI's **Antibacterial Drug Development (ABDD) Peds Trials** recommendations—including methods for streamlining trial design to decrease burden on sites and families, improving the informed consent process, and increasing engagement with healthcare providers—to improve pediatric clinical trials in ABDD and other therapeutic areas.	TITLE III—DEVELOPMENT Subtitle B—Advancing New Drug Therapies Sec. 3013.	TITLE V—PEDIATRIC DRUGS AND DEVICES	TITLE V—PEDIATRIC DRUGS AND DEVICES
Moving Beyond Traditional Clinical Trials	CTTI's work on **Decentralized Clinical Trials** is developing guidance for using telemedicine, mobile, and local healthcare providers in clinical trials, helping the enterprise to move beyond traditional trials. Potential benefits including faster trial recruitment, cost reductions, increased diversity, and more real world data.	TITLE III—DEVELOPMENT Subtitle C—Modern Trial Design and Evidence Development Sec. 3021.		TITLE IX—ADDITIONAL PROVISIONS—Sec. 903. Streamlining and improving consistency in performance reporting
Progressing Targeted Drugs for Rare Diseases	Through work in its **Mobile Clinical Trials** program, CTTI is developing comprehensive guidance for conducting clinical trials that use mobile technologies. Among many benefits, these trials enable patients to participate remotely, offering the potential for patients with rare diseases to participate—no matter where they live—thereby advancing scientific understanding of rare diseases.	TITLE III—DEVELOPMENT Subtitle B—Advancing New Drug Therapies Sec. 3012.		

Ensuring Human Subjects Protection	CTTI has championed and created actionable ways to improve the adoption of **single IRBs** (sIRBs) for multicenter clinical trials. CTTI's ongoing work intends to inform actions that it, the FDA, OHRP, and NIH can take to help the research community adopt sIRB review, and develop IRB-related resources related to mobile clinical trials. CTTI is researching sponsors' needs related to implementation of sIRB review, in order to inform the FDA's process to comply with the Cures Act requirement to harmonize guidance across the U.S. Department of Health and Human Services. Additionally, it is helping the NIH to develop a framework for evaluating the sIRB policy.	TITLE III—DEVELOPMENT Subtitle C—Modern Trial Design And Evidence Development Sec. 3023.		
Qualifying Drug Development Tools	CTTI's Mobile Clinical Trials **Novel Endpoints** recommendations provide a roadmap for identifying and developing technology-derived endpoints—an approach that offers the benefit of capturing aspects of life that matter to patients and collecting information about patients' experience in "real-world" settings. As part of this work, CTTI is also developing a database of feasibility studies of mobile technologies to serve as a centralized resource and avoid redundancy.	TITLE III—DEVELOPMENT Subtitle B—Advancing New Drug Therapies Sec. 3011.		
Expanding the Orphan Drug Grant Program	In an effort to increase the practice of leveraging **Registries** to run high-quality clinical trials—including those related to rare diseases—at lower costs, CTTI created recommendations that outline best practices for assessing and designing registries. Guidance includes ensuring data are reliable and robust, and implementing adequate measures for patient protections and data confidentiality.	TITLE III—DEVELOPMENT Subtitle B—Advancing New Drug Therapies Sec. 3015.		

	Also, through its **Decentralized Clinical Trials** project, CTTI is developing solutions for using telemedicine, mobile, and local healthcare providers in clinical trials—work that will further benefit patients with rare diseases by removing enrollment and participation barriers.			
Combatting Antimicrobial Resistance	CTTI's ABDD work also includes recommendations for designing more feasible clinical trials for **Hospital-Acquired and Ventilator-Associated Bacterial Pneumonia (HABP/VABP)**. One set of recommendations outlines strategies for streamlining protocol elements to increase enrollment and reduce trial complexity. A complementary set of recommendations describes methods to optimize operational efficiency in HABP/VABP trials by streamlining data collection. CTTI also conducted a prospective, multi-center, observational study through a network of assembled sites on the risk factors for HABP/VABP to inform clinical trial planning.	TITLE III—DEVELOPMENT Subtitle E—Antimicrobial Innovation And Stewardship		
Removing Barriers to Patient Participation in Trials	A number of CTTI recommendations address the ongoing need to increase patient participation in clinical trials. Our work in **Patient Groups & Clinical Trials**, **Mobile Clinical Trials**, **sIRBs**, and **Peds Trials**—to name a few—have identified and provided solutions for overcoming barriers associated with participating.			TITLE VI—REAUTHORIZATIONS AND IMPROVEMENTS RELATED TO DRUGS—Sec. 610. Expanded access.