CTI CLINICAL TRIAL & CONSULTING

February Newsletter

Where Life-Changing Therapies Turn First™

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Volume 13, Issue 2

Systematic Literature Reviews Can Help With Regulatory Requirements and Internal Planning for Future Projects

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Systematic literature reviews are a frequent component of work that CTI does for our clients. By definition, a systematic literature review uses clearly defined and reproducible methods to identify, select, and critically appraise relevant research, and to collect and analyze data from the studies that are included in the review. [1] In other words, the relevant published literature to meet a specific need is identified and then a comprehensive review is done, using a structured procedure which follows best practices established by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and Meta-analysis of Observational Studies in Epidemiology (MOOSE) guidelines.[2,3]

Every systematic review starts with an objective, which, along with the methods, search strategy and plan for data extraction are specified in a literature review protocol. By developing the objective and the protocol with the client, we make sure that we understand the client's need and customize the review so that it meets that need.

Systematic literature reviews are done for a wide variety of purposes that support work on a medication or device at any stage, from development to post market surveillance. **Our team of experts at CTI complete more than fifty of these reviews annually to assist sponsors with fulfilling regulatory requirements, providing information for future development activities, and prioritizing programs internally.** For reviews that CTI conducts, the most common purposes are described below:

Meta-analysis

Meta-analysis uses statistical methods to combine results from several studies to obtain a more reliable estimate of the effect measure and thus increase statistical power. This is done by calculating a weighted average of a common study result (e.g., odds ratio, p-value, etc) with weights related to the sample sizes of the individual studies. Meta-analytic methods can also be used to identify patterns among study results and any sources of disagreement. A systematic review of the published literature is a necessary first step of any meta-analysis. The review identifies, based on objective criteria e.g., study quality whether studies can be pooled before proceeding with a meta-analysis.

Cost-effectiveness analysis

Cost-effectiveness analyses are a commonly used method of weighing the benefit and cost of a novel intervention. **A properly conducted systematic literature review can be used to identify the needed parameter values for a cost-effective analysis.** This method is often a requirement of Health Technology Assessment bodies conducting a review of a novel treatment intervention. The systematic review ensures that the parameter estimates are not biased, and include all available data.

Clinical and economic outcomes

Systematic literature reviews can provide valuable insight into current treatment practices and product utilization for a disease

CTI Cares Spotlight

American Heart Association. Go Red for women

American Heart Association - Go Red for Women

1 in 3 women die of heart disease and stroke each year. National Wear Red Day with Go Red For Women was on Friday, Feb. 6, 2015.

CTI collected money and wore red at all locations on Go Red Day to show their support!

Click here to learn more and to donate!

CTI is proud to support Rare Disease Day 2015 - February 28th

Rare Disease Day

CTI is proud to sponsor Alliance for Regenerative Medicine 3rd Annual Regen Med Investor Day

New York City, NY - March 25th

or medical condition. Information on clinical and economic outcomes can also be collected, allowing unmet medical needs and potential areas for improved efficacy to be identified and documented. An accurate understanding of the existing clinical situation allows companies to proceed with product development based on information, rather than guesses or assumptions.

Safety reviews

Systematic literature reviews are mandatory for safety submissions to regulatory agencies. During drug development, Development Safety Update Reports (DSURs) containing information about all published literature with any safety information are required annually. After approval, systematic literature reviews are then required for Periodic Safety Update Reports (PSURs). Companies that market medical devices in Europe are required to submit Clinical Expert Reports with systematic safety literature reviews every other year.

Rare diseases

When companies are developing treatments for rare diseases, systematic literature reviews can be a key element of that effort. Thorough reviews of the literature are fundamental to establish what is known about the prevalence, natural history, current standard of care, clinical endpoints and unmet medical need for a rare disease. Once completed, the literature review can serve as the basis for drug development planning, clinical study design, and important regulatory submissions, such as the Pre-IND meeting briefing package and orphan designation request.

Systematic literature reviews for all of these purposes are a regular part of the work that CTI consultants undertake for our clients. **CTI experts would be happy to discuss how a literature review could help with your drug or device program - in development or on the market.**

1 Definition paraphrased from Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. http://www.prisma-statement.org/usage.htm

2 Stroup DF, Berlin JA, Morton SC, et al, for the Meta-analysis of Observational Studies in Epidemiology (MOOSE) Group (2000) Meta-analysis of observational studies in epidemiology. A proposal for reporting. JAMA 283:2008-2012

3 Welch V, Petticrew M, Tugwell P, et al, for the PRISMA-Equity Bellagio Group (2012) PRISMA-Equity 2012 extension: Reporting guidelines for systematic review with a focus on health equity. PLoS Medicine 9(10):e1001333

For more information:
www.ctifacts.com
513.598.9290

Upcoming Meeting Spotlight:

American Society for Clinical Pharmacology and Therapeutics Annual Meeting
New Orleans, LA
March 3 - 7, 2015

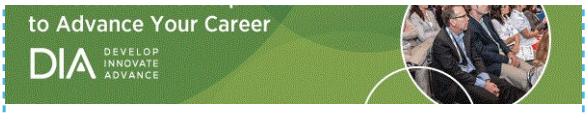
Stop by and visit us at Booth #318 throughout the meeting!

To schedule a meeting with us while we're here, please click here.

CTI is Presenting a DIA Webinar:

Pricing, Economic, Reimbursement, Market Share (PERMS) Strategy: An Interactive Holistic Approach in Rare Diseases

March 5, 2015 - 11:00a - 12:30p EST



Click here for more information and to register!

CTI is Presenting at 5th Annual Advanced Therapies Summit

Roundtable I: Cell Therapy Commercialization
Timothy Schroeder, CEO, CTI Clinical Trial & Consulting Services

March 12, 2015 - Paris, France

Click here for more information!

Recent CTI Publications:

Cryptogenic Strokes and Recurrence rates in Relation to CHADS2 and CHADS2-VASc Risk Scores
Poster based on a MarketScan analysis was recently presented at the International Stroke Conference in Nashville

Outcomes in Kidney Transplant Recipients From Older Living Donors
Englum, Brian R.; Schechter, Matthew A.; Irish, William D.; Ravindra, Kadiyala V.; Vikraman, Deepak S.; Sanoff, Scott L.; Ellis, Matthew J.; Sudan, Debra L.; Patel, Uptal D.
http://journals.lww.com/transplantjournal/Abstract/2015/02150/Outcomes_in_Kidney_Transplant_Recipients_From.19.aspx

Switching from Multiple Daily Injections to CSII Pump Therapy: Insulin Expenditures in Type 2 Diabetes
Guy David, PhD; Max Gill, MBA; Candace Gunnarsson, EdD; Jeff Shafiroff, PhD; and Steven Edelman, MD
http://www.ajmc.com/publications/issue/2014/2014-vol20-n11/Switching-from-Multiple-Daily-Injections-to-CSII-Pump-Therapy-Insulin-Expenditures-in-Type-2-Diabetes

Systemic Opioid Elimination After Implantation of an Intrathecal Drug Delivery System Significantly Reduced Health-Care Expenditures
John A. Hatheway MD, David Caraway MD, PhD, Guy David PhD, Candace Gunnarsson EdD, MA, Jennifer Hinnenthal MPH, Amanda R. Ernst MBA and Michael Saulino MD, PhD
http://onlinelibrary.wiley.com/doi/10.1111/ner.12278/abstract?campaign=wolearlyview

CTI received word that 2 abstracts were accepted and will present 2 posters at Heart Rhythm Society Meeting in May 2015.

Upcoming Meetings We Will be Attending

American Society for Clinical Pharmacology and Therapeutics Annual Meeting
New Orleans, LA - March 3 - 7

Alliance for Regenerative Medicine 5th Annual Advanced Therapies Summit
Paris, France - March 12

American Association for the

New Additions & Promotions at CTI

Lucas Holcomb joins as Accountant

Karin Köhler-Hansner, PhD joins as CRA Manager Europe

Chelsea Rump joins as Clinical Research Assistant

Join our Team!! We're looking for individuals to fill these positions:

Clinical Research Associate (US, Germany, France, Australia, Brazil)

Director, Health Outcomes Research (Cincinnati, OH)

Manager, Proposal Development

Study of Liver Diseases Industry Colloquium - Novel Targets and Therapies in Liver Disease
Research Triangle Park, NC - March 20 - 21

Alliance for Regenerative Medicine 3rd Annual Regen Med Investor Day
New York City, NY - March 25

To schedule a meeting with us at one of these, please click here

Study Manager (Cincinnati, OH; Raleigh, NC; Philadelphia, PA; San Francisco, CA)

Click here for more information and to apply!