Coordinating Center for Clinical Trials (CCCT)

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Today's Discussion

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- Coordinating Centers
  - Types of CCs and their services
  - Why are they important to research
- CCCT- Who we are
  - Our services
  - Our goal
  - How can we collaborate

What are coordinating centers

- *Mostly* utilized in multicenter trials (2^{+} enrolling centers)
- Serve as the nucleus of large clinical research programs
- Coordinate various activities and services needed for trial success
- Play a huge role in communication among stakeholders
- Some are founded in academic centers, others in industry
- Typically charged with setting a milestone driven timeline and promoting a strategy that ensures the trial completes on time and on budget

Data Coordinating Centers (DCC)

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As the name suggests, DCCs play more of a role on activities associated with data analysis and statistical design

- Expertise in clinical trial design and conduct (includes structure and quality standards)
- Collaborates in protocol development (statistical design, sample size calculations, analysis strategy)
- Provides data management and analyses
- Provides site selection based on feasibility/availability of data
- Insures appropriate adverse event monitoring (quality assurance)
- Procurement of services related to core labs (standardized data)
- Clinical monitoring of data (source comparison to database)
- Website support and online resources for the trial (EDC)
- Manuscript generation and dissemination of results

Clinical Coordinating Centers (CCC)

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Similar in name, CCCs play more of a role on clinical activities

- Provide technical expertise in the disease area
- Developing protocol, consents, SOPs
- Contracting with clinical centers
- Formulate site performance plans and recruitment activity
- Develop content of data collection forms
- Coordinate regulatory approval activities
- Obtaining investigational study drug
- Training of sites on clinical protocols

Well-established groups can be both DCC and CCC

Academic Research Organizations (ARO)

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- Have been around since 1980s
- A university-based organization/or nonprofit institution that performs one or more functions in a research initiative
- AROs provide
  - Academic expertise and leadership
  - Full-service clinical trial management capabilities
  - Site monitoring, safety monitoring, and clinical events classification
  - Data management, statistical analysis
- The focus of AROs
  - Developing and sharing knowledge to improve patient care
  - Leading and conducting multicenter clinical trials
  - Ensuring these trial findings are published and presented

How are coordinating centers important to research

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Successful trials require a team effort

- Sponsor/funding agency
- Investigators/clinical centers
- Vendors/partners/core labs
- Data Safety Monitoring Boards
- Participants

Challenges of Investigators

- Competing demands for your time
- Need for a central hub for logistics & communication
- Need for sound design and statistical analysis plan
- Need for data quality measures (standardization, monitoring)
- Provision of training (protocol, operations, EDC)

Who we are

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Coordinating Center for Clinical Trials (CCCT)

CCCT Mission and History

To improve a broad-spectrum of public health interests through the coordination of clinical trials, collaboration with clinical investigators, and development of statistical and trial methodology

- Founded in **1971;** ~$250 million in **funded projects**
- **Many large** NIH & Industry multi-center clinical trials
- Phase I, II, III trials (from **32** to **42,000** patients and site management ranging from **1** to **600+** sites)
- Leading role in clinical trials research **(science and practice – 5 Fellows of Society for Clinical Trials)**
- Long history of **collaboration** with many academic and community institutions

Major Trials

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- **HDFP** (Hypertension Detection and Follow-up Program)
- **BHAT** (Beta-Blocker Heart Attack Trial)
- **SHEP** (Systolic Hypertension in the Elderly Program)
- **ALLHAT** (Antihypertensive and Lipid-lowering Treatment to Prevent Heart Attack Trial); **GenHAT** (Genetics of ALLHAT)
- **SAVE** (Survival and Ventricular Enlargement Trial)
- **CARE** (Cholesterol and Recurrent Events Trial)
- **CCTRN** (Cardiovascular Cell Therapy Research Network)
- **CRYO-ROP** (Cryotherapy for Retinopathy of Prematurity)
- **ETROP** (Early Treatment of Retinopathy of Prematurity)
- **FLAT-SUGAR** (FLuctuATion with inSUlin and Glp-1 Added together)
- **TWiTCH** (TCD with Transfusions Changing to Hydroxyurea)
- **Mobile stroke unit trial** (Comparative effectiveness study in tPA eligible stroke patients)
- **CHILD** (Autologous Cardiac Stem Cell Injection in Patients with Hypoplastic Left Heart Syndrome (HLHS): An Open Label Pilot Study)
- **ELPIS II** (Allogeneic Human Mesenchymal Stem Cell (MSC) Injection in Patients with HLHS)
- **DCM II** (Comparative Efficacy and Safety of Transendocardial Injection of Allogeneic-MSC in Patients with Non-Ischemic Dilated Cardiomyopathy)

Impact

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Intellectual Contribution

- 600+ publications, 70,000+ citations
- 2002 ALLHAT JAMA paper , ISI Web of Science "one of the most cited recent papers in the field of Clinical Medicine", H-index ~ 100
- Trials published in NEJM, JAMA, Lancet and other leading journals

Landmark trials

- Changed worldwide treatment of hypertension
- Major impact on preventing blindness in premature infants
- Changed practice of post-MI treatment

Clinical Care

- Findings noted in clinical guidelines by national health organizations (e.g. – JNC 5-8); reviews; educational materials
- Findings resulted in standard of care for a disease

Our Services

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Study Design

- We help Investigators with design in all phases of trials
- Design includes hypothesis development, well-defined study objectives, selection of study outcome measures and an appropriate assessment schedule, power analysis, and sample size estimations
- Designs include comparative effectiveness, parallel group, factorial, cluster, cross-over, non-inferiority, futility, seamless Phase II-III, SMART, MOST, etc.

Our Services

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Study Implementation

- Site selection and recruitment of qualified Investigators and centers
- Assistance with protocol development and trial related training materials (e.g. core lab materials, CRFs, manuals of operation, etc.)
- Creation of secure web-based data entry system allowing Investigators 24/7 access to their clinical site performance metrics and quality control reports
- Recruitment and participation rate assistance: development of recruitment aids (video, posters, cards, etc.), study newsletters, and other trial promotion materials
- Safety and regulatory oversight (AE monitoring, reporting for FDA, DSMB, IRB)

Our Services

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Data Analysis and Dissemination

- CCCT uses best-practice methods for the analysis of clinical trial data. Novel statistical methods have also been developed to deal with more complex data when standard methods cannot be used
- Specific expertise in prognostic and prediction models/algorithms using machine learning
- Leadership in preparation of scientific reports and manuscripts and in the publication and presentation of study findings and results

Our Services

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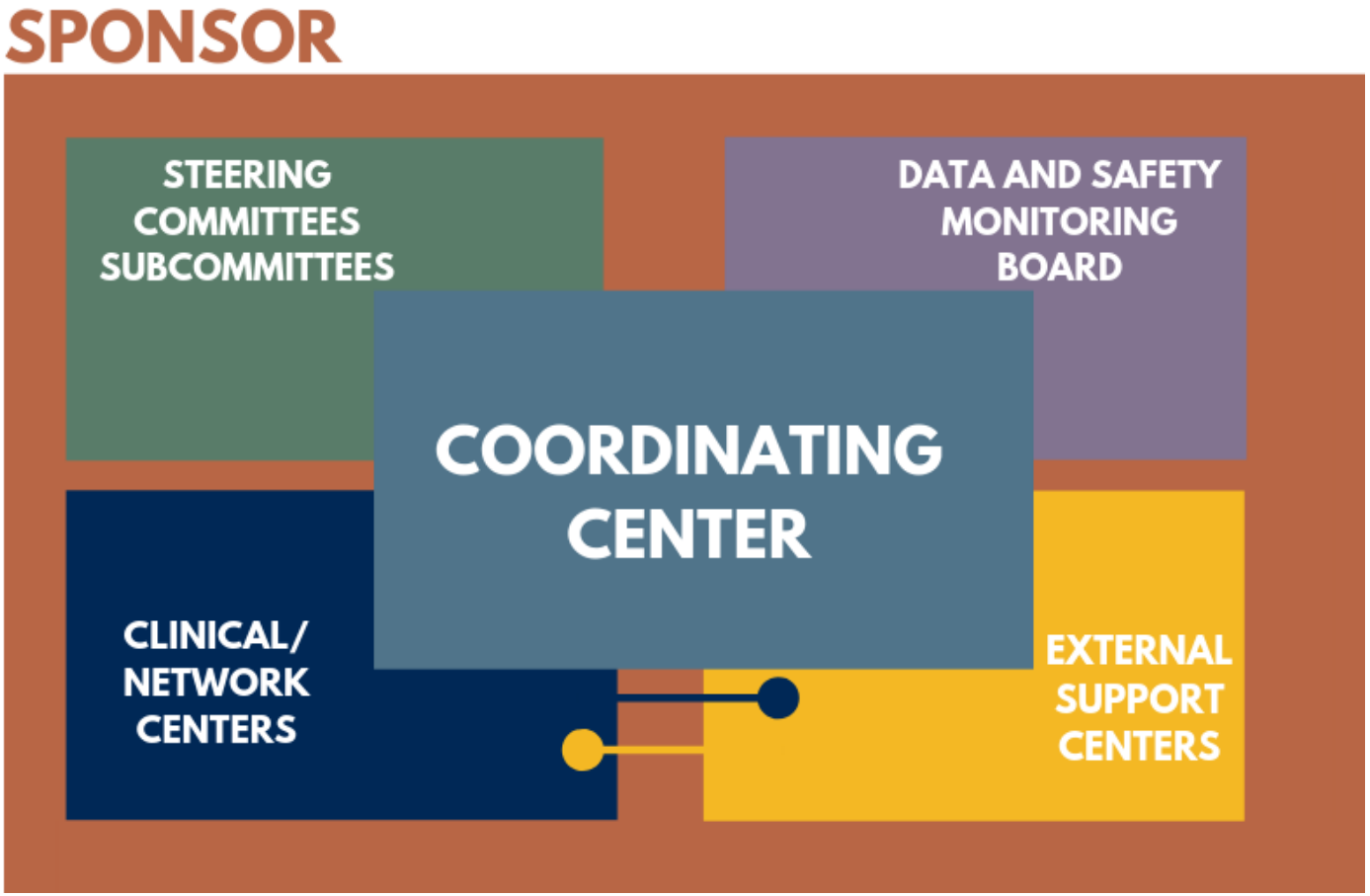
Trial Support

- Integrated approach combines administrative support, with project management, data programming, and statistical expertise from seasoned personnel to provide leadership and collaboration for the operation of a first-class coordinating center
- Design and development of web-based applications for data collection and randomization.
- Execution of plan for central data acquisition, harmonization, management, and analysis, including patient randomization and quality control measures
- Management of the fiscal and budgetary affairs of clinical trial operations; including subcontracts for patient care expenses to clinical centers and core laboratories

Clinical Trial Services & Structure

Services

Randomization
Clinic/ppt. Recruitment
Staff Training & Certification
Quality Control
Site Management
Biostats
Protocol Development
Programming
Data Collection & Mgmt.
Dissemination
Regulatory/Safety
Contracts & Payments
Site Monitoring



CCCT Team-Faculty

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Samiran Ghosh, PhD
Professor & Vice Chair
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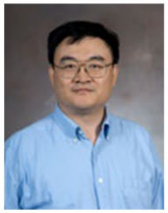

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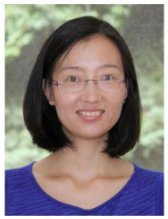

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CCCT Team

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Project Management and Trial Support Teams

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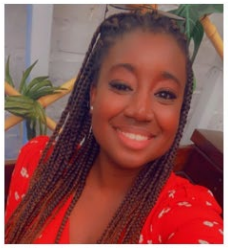

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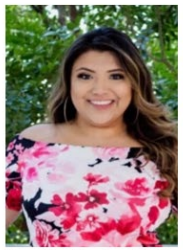

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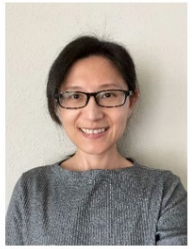

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Our Goal

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To be the Academic Research Organization (ARO) within the TMC providing academic leadership to full-service clinical trial management capabilities, including clinical expertise, statistical analysis, data management, safety monitoring, site monitoring, and clinical events classification.

We'll work with you from design to dissemination to meet all of your trial needs.

We'd like to hear from you

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What are the research needs of your department?

- What do you use for your data needs now?
- Who helps with your stat design and analysis needs?
- How many of you are involved in a multi-center trial? If not, are there limitations that keep you from applying to have multiple locations?
- What resources mentioned today would most benefit your teams?

How can we collaborate?

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Thank you!