NINDS Clinical Trials Methodology Course (CTMC)
2016 Syllabus and Expectations

Note: This course involves distance learning in small groups and webinars in the spring, followed by a residential experience in August, then additional small groups and a mock study section in the fall. The goal is to design a clinical trial by first developing a PROTOCOL, followed by a grant PROPOSAL. The course faculty will invest time in your project; therefore your participation in ALL aspects of the course is required to ensure your success.

The goal of the Clinical Trials Methodology Course (CTMC) is to assist trainees in the design of practical and successful clinical trials. The first step is to help you clearly define your experimental intervention. The next is to create a protocol which accurately describes a reproducible clinical research study, and a proposal which effectively provides the background scientific justification and summarizes the approach. The ultimate goal of a proposal is to gain the funding that will be necessary to conduct your protocol. Incorporating well-defined details into the protocol will make proposal development a much smoother process, and make implementing the project (if funded) considerably easier.

Course website, Adobe Connect, Basecamp and Blue Jeans

Course website – the CTMC website is https://nett.umich.edu/training/ctmc

Adobe Connect – we use this web-conferencing platform to hold CTMC webinars throughout the year. The CTMC meeting room URL is https://connect.umms.med.umich.edu/neurotrials

Basecamp – this will be the primary source of communication within your small groups. We use this web-based project management and collaboration tool throughout the course to manage submitted documents, provide to-do lists, and assign due-dates. A Basecamp account was created for you upon your acceptance to the course. We **strongly** encourage you to log in and familiarize yourself with this platform https://basecamp.com/

Blue Jeans – we use this cloud-based meeting platform throughout the course for CTMC webinars, small group meetings and for the Mock Study Section in the fall. We strongly encourage each participant and faculty member to use a webcam within the virtual conference rooms. The University of Michigan Blue Jeans URL is https://umich.bluejeans.com/
You can obtain an app for your tablet or smartphone as well.

Box – this is a file sharing service. We will share links to the folders that we create on Box.

Course text and other recommended websites

We encourage you to purchase Clinical Trials in Neurology: Design, Conduct, Analysis (Ravina et al, 2012)
We recommend that you reference the National Institute for Health Research Clinical Trials Toolkit throughout the course http://www.ct-toolkit.ac.uk/home

Outcome measurements

We will send various assessments via Qualtrics. These assessments will be focused on your progress throughout and after the course (e.g. baseline knowledge; IRB approved protocols; funded proposals; and other academic and/or professional accomplishments such as publications and serving on DSMBs). Assessment examples include:

1. Methodology/Statistics Quiz
2. Clinical Research Appraisal Instrument taken at beginning and end of the course
3. Outcome Assessments (what has happened to you and your project after the course).

Course Stages and Task List

Points are used to determine the minimum threshold required to be granted a completion certificate for the course. Timely completion of each task below earns 3 points (unless otherwise specified). A penalty of 1 point is applied for each task that is completed within 1 week of the due date. A penalty of 2 points is applied for each task that is completed great than 1 week after the due date. No points are given for uncompleted tasks. No points are given for completing the anonymous course evaluations, but you are strongly encouraged to evaluate each session. Individual links to survey instruments in Qualtrics will be provided.

Your tasks and due dates are tracked in your Basecamp!

Stage 1: Baseline

☐ Demographics survey
☐ Clinical Research Appraisal Instrument (110 items)
☐ Methodology /Statistics Quiz (20-30 items)
☐ Review instructions for Blue Jeans and practice logging in (test http://bluejeans.com/111)
☐ Complete travel form (link will be sent in spring)
☐ Read and review the NINDS Transparency in Reporting Guideline: (no points)
http://www.ninds.nih.gov/funding/transparency_in_reporting_guidance.pdf

Stage 2: Spring/Summer 2016

2.1 Spring/Summer Webinar series (ALL 12PM EST)

Real-time attendance at and participation in the webinar series is strongly recommended. Recordings will be posted to the course website http://neurotrials.training for those who cannot attend in real time. 3 points are earned if completed within 1 week of the webinar; 2 points if within 2 weeks; 1 point if done before the August in-person course.

☐ **April 15:** Asking a good early phase clinical trial question – Roger Lewis
☐ **April 22:** Small sample size clinical trials – Chris Coffey
☐ **April 29:** Selecting the Right Population: https://youtu.be/O9xjSgVjOkg - this is a webinar from the 2014 webinar series
☐ **May 6:** Crafting a specific aims page for an early clinical trial – Robert Silbergleit
☐ **May 27:** Rigor and Transparency. How to use preclinical data to inform trial design – Laurie Gutmann/Will Meurer
☐ **June 10:** What you need to know before talking to your statistician about sample size – Sharon Yeatts
☐ **July 15:** Creating a budget for a single-site clinical trial – Valerie Stevenson

AMA Credit Designation Statement
The American Academy of Neurology Institute designates this enduring material (April 15-October 21, 2016) for a maximum of 10 *AMA PRA Category 1 Credit(s)™.* Each webinar is eligible for up to 1 *AMA PRA Category 1 Credit(s)™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Accreditation Statement
This activity has been planned and implemented in accordance with the accreditation requirements of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the American Academy of Neurology Institute, the University of Iowa, Los Angeles BioMed, and the University of Michigan. The American Academy of Neurology Institute is accredited by the ACCME to provide continuing medical education for physicians.

2.2 Spring Small Group Sessions ALL TIMES EST (Subject to change)

Small Group 1 – **Monday: 12:00 2:00 pm.** Brett Kissela, Sharon Yeatts
Small Group 2 – **Monday: 2:00 pm- 4:00 pm.** Jordan Elm, Laurie Gutmann
Small Group 3 – **Monday: 6:00 pm - 8:00 pm.** Eric Foster, Wendy Galpern, Will Meurer
Small Group 4 – **Tuesday: 11:00 am – 1:00pm.** Robin Conwit, Dietrich Haubenberger, Kert Viele,
Small Group 5 – **Wednesday: 9:00 am - 11:00 am.** Erica Augustine, Jason Connor
Small Group 6 – **Wednesday: 12:00 pm- 2:00 pm.** Michelle Detry, Jeremy Shefner
Small Group 7 – **Thursday: 4:00 pm – 6:00 pm.** Kristine Broglio, Roger Lewis
Small Group 8 – **Friday: 10:00 am – 12:00 pm.** Valerie Durkalski, Pooja Khatri
Small Group 9 – **Friday: 4:00 pm – 6:00 pm.** Ken Cheung Robert Silbergleit

The goal of the small group sessions is protocol and proposal development. Small groups will be 90-minute sessions, which will occur by Blue Jeans video teleconference. There are two or three core faculty members in each small group. Each group has a biostatistical and clinical core faculty member. Each trainee will be primarily assigned to one of the group core faculty members who will be responsible for primary feedback on submissions. Each of the core faculty within a group will be familiar with all of the projects in the group.

2.2.1 Session 1 Elevator Pitches

☐ Prepare a five-minute "elevator" pitch where you discuss the rationale and justification for your clinical trial design. Each of the 4 small group trainees will present (with 5 minutes of feedback from faculty) during the first session.

2.2.2 Session 2 Outcome Measures

☐ Review Chapter 7 "Selecting Outcome Measures" in Ravina (course text)
☐ Prepare a ½ to full-page description of the potential outcome measures you are considering using in your clinical trial.
☐ Turn outcome measure sheet into core faculty members at least 48 hours prior to session 2
☐ Core faculty will provide feedback on submitted outcome measure document during session 2 (10 minutes each)

2.2.3 Session 3 Hypotheses

☐ Review Chapters 2 and 4 in Ravina (course text)
☐ Prepare a ½ to full-page description of the planned hypotheses and main objectives of your clinical trial.
☐ Turn hypotheses and objectives sheet into core faculty members at least 48 hours prior to session 3
☐ Core faculty will provide feedback on submitted hypotheses and objectives document during session 3 (10 minutes each)

2.2.4 Session 4 Specific Aims

☐ Prepare 1 page specific aims document to be used in grant application. Include additional 0.5-1 pages describing likely grant mechanisms used (due to core faculty 48 hours prior to session).

2.2.5 Session 5 Protocol Synopsis

☐ Review Chapters 27 in Ravina (course text). This reading is geared towards multi-center trials but it provides a good overview
☐ Prepare protocol synopsis. A template is available at this link
https://umich.box.com/s/rgd4rdaq5ln5lht037ifzyz32tdbzq7w
☐ Turn protocol synopsis in to core faculty members at least 48 hours prior to session 5
☐ Core faculty will provide feedback on submitted clinical trial synopsis document during session 5 (10 minutes each)

2.2.6 Session 6 Budget

☐ Review the following article http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2793732/
☐ Review the following website and look at the schema examples
http://research.unc.edu/offices/sponsored-research/resources/research-toolkits/developing-submitting-proposals/data_res_osr_proposalbudget/
☐ Prepare budget and personnel justification draft. (Consider getting an example from your mentor and/or your departmental research administrator)

2.2.7 Full protocol draft

We recognize that not all elements of the design, sample size and statistical analysis plan will be worked out after the small group sessions. It is important to attempt to fill out as much of a complete protocol template as possible, so that it will be feasible for you to revise and finalize this document while you are in Ann Arbor. Note: some elements of the protocol template may not apply (or may not seem to apply) for early phase trials so please mark sections as not applicable. These sections will be deleted when you finalize the protocol.
☐ Review clinical trial protocol template
http://www.ninds.nih.gov/research/clinical_research/toolkit/protocoltemplate.doc OR drafts from NIH/FDA available here: http://osp.od.nih.gov/office-clinical-research-and-bioethics-policy/clinical-research-policy/clinical-trials (even if you are not planning an IND/IDE trial, many of these elements are extremely helpful to consider and include).
☐ Prepare first complete draft of your clinical trial protocol

2.3 Evaluations

☐ Complete Evaluations of Small Groups

Stage 3: Summer Residential Course 2016

3.1 Didactics

A variety of course lectures and other activities will occur during the summer residential course in Ann Arbor, MI. A complete agenda will be provided closer to the residential course. Attendance at the large group lectures is required. Readings will be assigned by lecturers from the residential course. A reading list will be provided in Box.

Stage 4: Fall 2016

4.1 Fall Webinar Series ALL 12PM EST

☐ **September 9:** What clinical trials study sections love and hate – Panel
☐ **September 23:** Screening and enrollment. How to ensure you have subjects – Dixie Ecklund/Mearianne Kearney
☐ **October 7:** Adverse event reporting and safety monitoring – Robert Silbergleit
☐ **October 21:** Special topics in human subjects protection: acute and chronic conditions in neurology – Pearl O'Rourke

4.2 Fall Small Groups Sessions

The goal of the fall small group sessions is continued protocol and proposal development. Small groups will be 90-minute sessions, which will occur by Blue Jeans video teleconference.

4.2.1 Session 1 Research Strategy

☐ Prepare a draft of the research strategy appropriate to the proposed grant mechanism. (Due to core faculty 48 hours prior to session 2)

4.2.2 Session 2 Human Subjects Protection Sections

☐ Draft the the human subjects protection sections of your proposal, appropriate to the proposed grant mechanism. (Due to core faculty 48 hours prior to session 2).

4.2.3 Session 3 Wrap Up and Finalize Proposal

☐ Wrap up and discuss any loose ends and plans for submission of grant/implementation of trial.

4.2.4 Proposal Submission

☐ A complete draft of your proposal revised based on feedback from above small groups and other iterative feedback is due by October 15. However, small groups completing proposals substantially earlier than this may be able to have study sections accelerated.

4.3 Mock Study Section

Trainees will be expected to turn in a protocol and proposal for inclusion in the Mock Study Section. A consent form must be included as an appendix, as well as a screening and recruitment plan. A safety monitoring and adverse event reporting plan must also be included as an appendix if not addressed in protocol. The session will be recorded for later review by the trainees. Trainees will be permitted to attend sessions and observe but will generally only speak if called upon.

☐ Core faculty and other reviewers will submit critiques to the CTMC office at least 48 hours prior to the session.

Stage 5: Beyond

5.1 Reunion at American Academy of Neurology Annual Meeting (Spring 2017)

Trainees from the 2016 and previous cohorts are invited to join the annual AAN-NINDS/CTMC Meeting and Reception at the AAN Annual Meeting. If you are unable to attend the reception, you will be asked to prepare an abbreviated single slide update to be shared at the reception. If you are able to attend the reception in person, you will be asked to prepare a 2-slide update of your project to present.

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