TTUHSC CLINICAL RESEARCH INSTITUTE

FREQUENTLY ASKED QUESTIONS

An Introduction from the Executive Director, President and Provost & Dean, School of Medicine

The Clinical Research Institute (CRI) was implemented in 2010 to promote and facilitate original, investigator-initiated, patient oriented research. In support of that mission we

arisen repeatedly over the years so it was decided to develop a resource for investigators

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A. Clinical Research Institute Overview

1. *Question*: **What is the Clinical Research Institute?**
Answer: TTUHSC's Clinical Research Institute (CRI) is a unique group of individuals whose sole mission is to facilitate original investigator-initiated clinical research across the TTUHSC campuses and schools. The CRI is NOT the same as the institutional review board (IRB), but we work closely with the IRB. The CRI's website is https://www.ttuhsc.edu/clinicalresearch/

2. *Question*: **What services does the CRI provide?**
Answer: The CRI can assist you with study design, all IRB work, study conduct, data analysis, and dissemination of your results.

3. *Question*: **I understand that the *CRI* offers many different services. Can I consult the services that I need such as statistical analysis and consulting and then submit the proposal directly to IRB?**
Answer: You are correct that the *CRI* offers many different functions including protocol preparation, protocol submission, statistical analysis, and protocol reviews, etc. One of the more popular functions is the streamlined IRB submission done on behalf of the investigators by the *CRI*. The investigator still has to approve the submission but the CRI facilitates dealing with a time consuming process. Nonetheless, you are more than welcome to submit your protocol directly to the IRB without going through the *CRI*.

4. *Question*: **Where is the CRI located?**
Answer: Currently the Lubbock CRI is located in room BA-101 in the basement of the TTUHSC in Lubbock, next to the police department. The Odessa CRI is located in room 2C-44, on the second floor of the Administration Building across of the TTUHSC School of Nursing in Odessa.

5. *Question*: **What will the CRI charge me for their services?**
Answer: You will be charged nothing to use the services of the CRI. If you need funds for study tests/procedures you will have to find a source of funding.

6. *Question*: **Why should I use the *CRI*?**
Answer: You should use the CRI because we offer years of clinical research expertise at no cost to you. We also have a close working relationship with the IRB, so we typically have little trouble getting studies approved.

7. *Question*: **I am not familiar with the concept of a clinical research institute. Is this commonly found in most academic health centers or medical schools? How is it funded, since I understand that there is no charge to individual faculty for services used?**
Answer: We are fortunate at TTUHSC in having the Clinical Research Institute (CRI), which is a somewhat unique model for supporting research. The origins of the *CRI* started in Amarillo when Dr. Steven Berk was regional Dean at that campus. Subsequently the clinical research center was started in Lubbock. Given its success, President Tedd Mitchell expanded its role into an institute so that faculty in all TTUHSC schools may use CRI resources. The *CRI* is funded through the Office of the President and the Provost and through a tax on clinical departments. Some medical schools have clinical research centers funded by the NIH. These centers enable

clinical research to be carried out. Our role is slightly different in that we aid and promote the development of clinical research as well as enable execution of clinical research studies.

B. CRI Eligibility

1. *Question*: **I am a full time faculty member; my study involves the collection of samples from study participants. I am not really able to assist with this collection during the academic semester when I have a full teaching schedule. Is the CRI able to collect the required samples during the semesters, and will I be able to resume collection between terms?**

Answer: Yes, the CRI will be happy to screen, consent and collect your samples during the teaching year. This is preferred by the CRI, especially if there are to be

6. *Question*: **I am a senior nursing student and am interested in research. Can I do my clinical hours in the CRI?**

Answer: Yes, the CRI has several research nurses who serve as coordinators; we can generally arrange for you to follow them to complete clinical hours. Come to the CRI and speak with the director.

C. CRI Support Activities

1. *Question*: **Why does the CRI review my protocol, rather than submit it to the IRB for me, as is?**

Answer: The CRI Directors, statistician, regulatory specialist, and monitor will use their extensive experience to review the draft documents you submit and help you finalize your protocol to give it the highest likelihood of success and seamless IRB approval with the best chance to publish the results. This review will ultimately save time and reduce the need for resubmission because the CRI staff is likely to be able to anticipate IRB needs and concerns. In addition, the CRI review ensures that TTUHSC resources will be used in the most appropriate, and efficient manner.

2. *Question*: **My project received IRB approval. The CRI asked to meet with me before they start enrolling subjects, but isn't the study ready to start once the IRB approves it?**

Answer: After a study is approved by the IRB, the study team will need to meet in order to confirm study logistics, such as who will perform certain tasks, to verify which study procedures are standard of care and which procedures will be billed to research funds, confirm contact information, etc. From time to time, the study team may also ask for the PI to meet in order to discuss questions/issues that arise with the study once it has started.

3. *Question*: **I am involved in a research project that requires many data points. I am not always able to collect all the data points for each subject. Will these subjects be excluded from the project? Is there a way to retain these subjects?**

Answer: Although it is preferred that all data points be captured, there are instances where data points are not available for different reasons. This missing data may be a result of procedures not being done, or lack of documentation, for example. As you begin to analyze and categorize your data, discuss these missing data points with your statistician. Together, you can determine if the data that have been captured for these subjects can be used for your project. It is best practice to anticipate the possibility of missing data and build this into your protocol from the beginning.

4. *Question*: **I've found or created a database that might be interesting to analyze. Can you help me clean and analyze the data?**

Answer: We typically do not have the resources to clean the study data. We can analyze the data, but with no pre-identified hypothesis to test, we would merely be fishing for significance. Please start by determining your research questions and hypotheses as well as the specific factors and outcome measures you want analyzed.

D. CRI Monitoring

1. Question What is

have blanks; this may lead someone to suspect a lapse in study methods or data collection. The monitor can facilitate best-practice use of datasheets to explain unreported data, such as inserting a "period = ." and using appropriate abbreviations (UNK=unknown, ND=not done, NA= Not applicable)

6. *Question*: **Can the monitor help me with recruitment?**
Answer: If you wish, the monitor can provide you with an enrollment rate for your study as part of the monitoring report. Investigators often have a tendency to overestimate how quickly a trial can be completed. Typically, by the third month of a trial, key problems can be handled and a true enrollment rate can be estimated. Additionally, having scheduled meetings with the research team can keep enthusiasm up and recruitment moving forward.

7. *Question*: **Does the monitor have any role in evaluating the scientific validity of my trial?**
Answer: No, evaluating scientific validity is the IRB's responsibility. The CRI team can assist you with designing your study so that the scientific question you are posing is answered by your protocol. The IRB does appreciate receiving study applications that have been reviewed and managed by the CRI prior to IRB submission. Several years' experiences have assured the IRB that the CRI review helps ensure the T's are crossed and the I's are dotted.

8. *Question*: **The monitoring process sounds intrusive very specific, and just another hoop that I have to go through to conduct research. I know what I am doing, so why should I agree to this?**
Answer: The CRI wants your study to be the best it can be, have a good chance at publication, and to help you avoid any compliance problems that could lead to trouble. The TTUHSC *CRI* has a wealth of knowledge and experience to help you with every aspect of your study. We are extremely familiar with what institutional and federal auditors will look for if they decide to review your study. The FDA has the right to visit TTUHSC at any time, and to look at any study. If FDA auditors find problems, they have the ability to suspend research activities for that investigator or for the entire institution, especially if the problems are thought to be institution-wide. The monitor is a resource to help ensure that problems are found and dealt with quickly so if the FDA comes to audit us, they will find that research is being conducted in compliance with institutional policies as well as federal regulations.

9. *Question*: **What power does the monitor have over me and my research?**
Answer: None. The monitor is here to help--to be a second set of eyes and make sure the protocol is being carried out as written. If discrepancies are found, the monitor reports them to the PI. It is up to the PI to do what they wish with the information the monitor provides.

10. *Question*: **Can the monitor stop a trial from continuing?**
Answer: No. That power rests with the PI, the IRB, and the FDA.

11. *Question*: **What purpose does the monitoring report serve?**
Answer: Monitoring reports should be reviewed by the PI and the coordinator for accuracy and agreement. The report can point out problems the PI might not have been aware of and generate discussion within the research team as how best to go about making changes. The FDA looks for PI involvement in the clinical trial. As the PI of a clinical trial, you are ultimately

E. Study Design & Grant Support

1. *Question*: **What are the different study designs that can be utilized in research studies?**
Answer: There are two major types of study designs: observational and experimental. Examples of observational studies include cross sectional surveys, cohort studies, and case-control studies. Experimental studies consist of randomized controlled trials and quasi-experiments. There are various advantages and disadvantages of each study design, and you should choose the design that is most appropriate for your research questions and data resources. Moreover, different statistical procedures are applicable for different study designs. For instance, the measure of association between variables in a cross sectional study may be prevalence odds ratios while a cohort study will

6. *Question*: **My grant is about to expire, but I am not done with study recruitment and follow up. What do I do?**

Answer: If your grant is about to expire, you should contact the TTUHSC Office of Sponsored Programs and work with them to submit a letter requesting a funding extension. You will include specifics about why the study is not completed and outline difficulties you may have had.

the study sample may not be normally distributed or there may be missing data points. Unless your proposal is a pilot study, a power analysis may also be required.

G. IRB & Regulatory Policy

1. *Question*: **I have been**

associated with it. Medrio offers cloud storage and, in some cases, allows data to be downloadable into statistical programs. Some other academic institutions use Red-cap. TTUHSC also uses Integrated Medical Research Informational System (iRIS) for paperless IRB submission and communication. At this time TTUHSC is not using electronic consent forms, but doing so is a matter for future consideration.

7. *Question*: **I just submitted a study to the IRB. When will it be approved?**
Answer: The length of time for IRB approval depends on the type of study you are submitting. If you submitted a retrospective chart review or a survey study, typically these studies are reviewed within a week or two depending on the IRB's workload and whether or not the study qualifies for expedited review. If you are randomizing patients to an experimental procedure or if the study poses greater than minimal risk to subjects, then this study will need to be reviewed by the full board. This meeting occurs once a month and the study must be submitted and the appropriate signatures obtained prior to the deadline for that month. Any questions the IRB has will need to be addressed to their satisfaction prior to granting approval.

8. *Question*: **I have submitted a protocol to the IRB. The IRB has requested that I provide additional information and consider changing the protocol. Am I obligated to comply?**
Answer: The institutional review board (IRB) serves a vital role in

manuscripts that result from the research you should submit them to the IRB in your closure report.

12. *Question*: **What is required from the PI when a participant experiences an Adverse Event?**
Answer: The PI must determine whether or not the Adverse Event is study related, its severity, and whether the event was expected. The PI can document this by placing his/her initials and the date on the study specific adverse event log or make a specific note in the participant's records. In some cases, the AE will need to be reported to the IRB.

H. IRB Amendments

1. Question: One of my colleagues wants to work with me on a study. Do I need to do anything?

Answer: Yes, your colleague will need to open an iRIS account and be added to the study via an amendment. The CRI can send you a list of the steps your colleague needs to complete to open their iRIS account and we can submit the amendment to add new personnel to the study to the IRB. Please note that new study personnel must complete any required training and be added to the study prior to starting study activities.

2. Question: My protocol was previously approved by the IRB. The age range of the study group is 25–89 years of age. A collaborator has suggested that we would be able to recruit more expeditiously if we expanded the age range to 18–89 years of age. Since this is a minor modification and essentially does not change the protocol, can I simply implement this change?

Answer: No. It is very important that any modification of the protocol be reviewed by the IRB and approval obtained.. Implementing the proposed change without IRB approval would constitute a regulatory and protocol violation and place you and the institute at risk. Once IRB approval is received you can then expand the recruitment age range for your sample.

3. Question: I am doing a research project in my clinic, but my study has faced a number of screen failures r promising candidates who did not meet inclusion criteria. What can I do risk. protocol inclusion modification iRIS Once IRB then

J. Study Implementation

1. *Question*: **The IRB has approved my protocol and I have requested research funds. Can I start the study even though the funds are not yet in the designated account?**

Answer: Unless you wish to pay for the study out of your own pocket, the best practice

6. *Question*: **What happens if my study is not completed, but I am leaving TTUHSC?**
Answer: Sometimes circumstances change during research, but that does not mean that all of the hard work you have done was for nothing. Depending on the type of study and your role on the study team, you may still be able to collaborate with TTUHSC to bring the study to completion and work on a publication.

the p-value quantifies the probability of obtaining an effect at least as extreme as the one in your sample data assuming that the null hypothesis (of no difference) holds. The idea is that a small p-value is strong evidence to the contrary (a true difference) between the intervention and standard of care as stated in your null hypothesis, while a large p-value is insufficient evidence to reject the assumption of no effect. Note that the null hypothesis CANNOT be proved, but only disproved using traditional statistical methods (though equivalence/non-inferiority tests can be used to show the 95% confidence interval of the difference between treatments lies between some pre-specified threshold for clinical significance, like ±10%; however, these typically require massive sample sizes and are often infeasible in a single center study).

8. *Question:* Could you give me an example of a clinically relevant result that is statistically insignificant?

Answer: Drug X drops systolic BP by 10 mm from 145 to 135 mmHG (4 to 15 mm HG) in 10 patients. Given the small number in this study, statistical significance may not be achieved because this study is underpowered. A large sample size may confirm clinical efficacy if the effect size was not overestimated.

9. *Question:* Which is best for graphically depicting data – standard error of the mean or standard deviation and why?

Answer: The answer to this question may depend on the preferences of the publisher, since using the standard error is still common practice in some areas. The SAMPL guidelines state that one should report standard deviation in tables, using the form "mean (SD)", not mean ± SD. The standard error of the mean (SE) is not recommended to indicate the precision of an estimate because it is essentially a 68% confidence interval. The 95% confidence interval should be used instead; this consists of two numerical values defining a range of values within

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such, it is necessary to model the correlation between times. We recommend a repeated measures analysis of variance (ANOVA) to evaluate differences or perhaps a mixed modeling method if some values are missing.

12. *Question*: **I see that several articles use a variety of p values, denoting statistical significance ranging from p< 0.05 to p< 0.0001. Can I use the commonly accepted standard p< 0.05 as the statistical standard for significance in my paper? What advantage do I get with using more stringent criteria?**

Answer: Alpha = 0.05 is merely a 1 in 20 chance of making a type I error. Having a 1 in 20 chance of being wrong in an assertion is not a great deal of confidence. For example, if lives are on the line, you might want to be more certain than 1 in 20. Furthermore, if you publish 20 manuscripts in your career with p<0.05, there's a good chance that one of your conclusions was wrong. It's probably wise to go with the standard p-value for your field/area of expertise. Still, this is the reason that we should all strive for publishing reproducible studies, as we are in the business of seeking the truth about an intervention. However, in the case of having multiple comparisons in a single study, you may want to utilize a more stringent p-value for statistical significance since comparing multiple associations is more likely to give you a higher chance of finding significant results.

13. *Question*: **Why should I use confidence intervals in my paper?**

Answer: Confidence intervals are generally more informative than p-values because they summarize both the central tendency and potential variation of this estimate due to chance. They also help the reader better apply/utilize your findings by tying the result to a meaningful clinical measure. For example, reporting the difference in mortality rates between two treatments in terms of a 99% confidence interval may allow the reader to easily estimate the potential variation in the number needed to treat to save a life using the experimental treatment.

14. *Question*: **I have just received review feedback on my submitted manuscript. One major critique appears to be that I have used parametric statistical methodology as opposed to non parametric statistical methodology. Could you please explain the important differences?**

Answer: Parametric statistics assume that the sample distribution comes from a population that is typically bell-curve distributed (normally distributed) and deals with the estimation of population parameters (i.e., the mean). Non-parametric statistics are distribution-free methods; they rely on ordering or ranking of observations. Skewed distributions, such as length of stay, may result in the need to use non-parametric statistics, or data transformati.2250TD-000n

15. *Question*: **I had projected a sample size of 100 patients for my study based on power analysis. I now have obtained data on 80 patients. Should I wait for the complete number of subjects to be recruited and the study finishes or should I run statistical analysis on currently available data?**

Answer: If the sample size was projected based on a rigorous power analysis, the number is expected to reflect an appropriate balance between the effect size and the required power. Therefore, you should wait until you collect all the data. However, if your study is facing other issues related to low recruitment of study participants, you may not have other options. In such a case, a preliminary analysis using what data you have may be sufficient but should be noted in any publication.

16. *Question*: **In a graphical representation of my data, I noticed some extreme outliers. These outlying data appear to significantly affect the analysis. What are my options?**

Answer: Sometimes outliers are due to measurement errors or simple typos. You should investigate these cases carefully to determine if they are *systematically* different from the other observations in your sample. If this is the case, you may need to post-exclude these subjects and report your findings based on your effective sample (i.e. individuals with CF but not Turner or Noonan syndrome). However, if there is no identifiable difference in these individuals and you suspect the outliers, it's possible to perform the analysis with and without outliers to see if conclusions differ.

17. *Question*: **I noticed my data are not normally distributed. Can I my data outliibuted.**

involving multiple assessments, also increase the probability of having missing data and appropriate steps to prevent this issue should be taken in advance.

L. Publication

1. *Question*: **What are the guidelines for co authorship on a publication, as compared to a list for an article's acknowledgements?**

Answer: Acknowledging support and helpful resources is an important part of a publication. Whether an individual is included as a co-author or listed in the acknowledgements should reflect the workload of the entity and relationships that were negotiated or determined in advance. All clinical researchers have been assisted by a variety of people, resources and institutions and it is important to acknowledge the help you received. However, if an individual or individuals have contributed substantially and meaningfully to the publication, it is appropriate to list them as co-authors. In biomedical publications, the initial author is often the "mentee" within a collaborating group who assumed a major role in the study conduct; the final author is often the "mentor" or the scientists within whose laboratory or clinic the study occurred. However, this is not an absolute distinction. Academic institutions are more likely to give the first, second, and last authors more credit for meaningful participation than someone listed further down the paper's author list.

2. *Question*: **How do I write a good abstract when submitting my paper for publication?**

Answer: It is important to follow specific journal recommendations about the abstract. Most abstracts are about 250 words or less and many are highly structured, with headings that mirror the article's organization. You will note that some longer abstracts are truncated in PubMed. Writing a good abstract is quite difficult since you have to condense your project, its findings, and its conclusions in a limited number of words. One way to look at this is to consider the essential findings about your project and what information a reader needs to determine sufe81Tf2.190TDis0003Tj/TT511f.2250TD.0002Tc(the)Tj/TT411f1.360TD0Tc<0003Tj/TT51Tf98.8851.inthesomeessential and studyconduct:participat

4. Question I am reading a lot about the importance of citation indices. I know that I can use Google Scholar to track my citations. Should I focus my efforts on

regarding the maximum size and any formatting details. You need to ensure that visitors to your poster as well as the judges can read the poster font from a distance of 6 feet, such as with a title of at least 1" (72 points) and text of at least .5" (36 points) or more. A common error is to make the poster too busy or text-heavy, which is also distracting since visitors may be reading your poster while listening to you present your findings. Therefore, include only essential content with adequate visuals, and practice your verbal presentation. Extensive references are usually not needed but do include contact information such as your name and e-mail address. At the presentation site, mount your poster at the appropriate time, since the judges may be looking at the posters at unscheduled times. Be sure to dress appropriately and be on time for your presentation. Be cognizant of the venue and the theme of the presentation. It is also a good idea to have a few hard copies of your poster printed in case you connect with someone who may be interested and/or an expert in your area for future collaboration. TTUHSC's Educational Media Services has a number of poster templates and can provide assistance with design and printing:
http://www.ttuhsc.edu/som/medicaleducation/mededmedia.aspx

8. *Question*: **I have recently read about predatory journals. It is my understanding that predatory journals require payment and thus any journal that**

5. *Question*: **I have identified a database of interest to me and would like to do some data mining. However, the database operators require not only an institutional agreement but a personal liability agreement from me. The reason given is that some of the data is identifiable. Given the personal liability risk, should I undertake access to this database?**

Answer: An increasing numbe0003Tj/t.00053j/TT61.0005Tc(personal)Tj/TT11Tf3.610TD0Tc<0003Tj/g3T6na561T