Clinical Trials 101

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What is a clinical trial?
## What is a Clinical Trial?

<table>
<thead>
<tr>
<th>Clinical Trial</th>
<th>Observational Studies</th>
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<tr>
<td>- Prospectively planned</td>
<td>- Retrospective</td>
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<td>- Conducted under well defined conditions:</td>
<td>- Participants are selected on the basis of presence or absence of an event/condition of interest</td>
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<td>- Subject Selection</td>
<td>- Subjects can be identified from hospital records or other data sources</td>
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<td>- Intervention and evaluation policies</td>
<td>- Investigators are passive observers</td>
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<td>- Specific questions-objectives</td>
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<td>- Justify the number of subjects, sample size. Have a statistical plan</td>
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<td>- Measurable results rather than plausible reasoning are required to support conclusions</td>
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THE RESEARCH LIFECYCLE

1. Your Research Strategy
2. Developing Your Proposal
3. Research Process
4. Publication
5. Impact

POST-AWARD
PRE-AWARD
Research is a **systematic** investigation, including research development, testing and evaluation, designed *to develop or contribute to the generalizable knowledge.*
Have a protocol

A well designed protocol provides the clinical research team *instructions* and *directions* that are strongly *supported* by scientific rationale for conducting the study. Adherence to the protocol will provide *consistent and reliable data*, as well as guidance on conducting the protocol *in a manner to protect human subjects*.
Have a statistical plan

• Statistical methods to be used to define the analysis:
  • Sample size
  • Treatment assignment
  • Efficacy
  • Safety
  • PK
  • Plans for interim analysis
  • Subject disposition

Collaborate with a biostatistician or methodologist (BERD)
Ask yourself.....

- Is this feasible?
- Why you want to participate?
- Science?
- Indication?
- PI Collaboration?
- Patient Population?
- Feasible?
- Patient Population?
How do we protect human subjects?

- Design of the study
- Review by the local IRB
- Protocol defined safety measures
- Trained research staff
Know the Rules and Regulations

- International Conference on Harmonization/Good Clinical Practices (ICH/GCP)
- IRB (Institutional Review Board)
- Your Office SOPs (Standard Operating Procedures)
- The Belmont Report
- Declaration of Helsinki
- Institutional requirements
- *Industry Requirements
- *Government agencies (DHHS/OHRP; FDA; NIH)
(* when applicable)
Regulations! Complicated, boring regulations!
We can’t go over them
We can’t go under them
We can’t go around them
We’ve got to go through them!
Good Clinical Practice (GCP)

GCP is an international ethical and scientific quality standard for designing, conducting, recording, and reporting trials in human subjects that involve the participation of human subjects. This standard provides public assurance that the well-being of trial subjects is protected, and that the clinical data are credible. Good Clinical Practice (GCP) will likely follow the International Conference on Harmonization (ICH) guidelines in many aspects. Good Clinical Practice (GCP) will enforce tighter guidelines on ethical consideration of a clinical study. Higher standards will be required in terms of comprehensive data documentation for the clinical protocol, record keeping, training, and use of facilities, including computer systems. Quality assurance efforts will be needed to ensure that these standards are achieved. Good Clinical Practice (GCP) will provide assurance that the studies are conducted in such a manner that protects the rights, safety, and welfare of the subjects.
13 Principles of ICH-GCP

1. Ethical principles of the Declaration of Helsinki.
2. Benefit of the individual (benefits justify risk).
3. Protection of individuals prevail.
4. Adequate drug data to support clinical trial.
5. Clinical trials should be scientifically sound.
6. IRB/IEC approvable / favourable opinion.
7. Subject care is under a qualified physician.
8. Staff is qualified, educated, experienced and trained.
9. Obtain freely given informed consent.
10. Data accuracy.
11. Confidentiality of records.
13. Quality systems implemented.

The rights, safety, and well-being of the trial subjects are the most important considerations.

A trial should be conducted in compliance with the protocol that has been received prior IRB approval.

Freely given informed consent should be obtained from every subject prior to clinical trial participation.

All Clinical trial information should be recorded, stored and handled in the way it allows its accurate reporting, interpretation and verification.
The Importance of Principal Investigators

- Only 15% of doctors participate in research as Principal Investigators
- 90% of the doctors that do participate in their first clinical study never participate in a second one
- This is unfortunate because PIs play a key role in raising awareness to the general public
- Patients are more likely to enroll in a clinical study if their physician is also a PI
Roles and Responsibilities

- Although the PI is ultimately responsible for the overall conduct of the study, it does not mean that he/she has to do all of the work.
- Most of the work that goes into running a study will be delegated to the study coordinator and other research staff.
- The PI oversees the studies to ensure that GCP guidelines are met and that the protocol is being followed as accurately as possible.
Know the workflow
Be involved

• Once the contract is signed, schedule SIV
• Be sure to attend and meet people at SIV (very important)
• Get information about accrual/amendments/toxicities
  • May consider pre-huddle prior to SIV
• Meet with your staff, especially, CRC, data manager
• Go over indication/logistics/planning
• Recruitment Plan
• Remember: Protocol is most important (Written Interpreted)
Be involved

• Know your patients….
• Eligibility: Dual verification of eligibility. Checklist are helpful, verify backup source
• Follow up, visits, message, calls (all are very important)
• Measurement of primary endpoint, crucial scheduling – CT’s, lab results, QOL assessments, Physical exams, etc.
• Documentation – Proof of PI oversight
• Investigator calls, safety calls, monitor visits
Provide oversight

- Enroll, enroll, enroll....
- In a way YOU are the SPONSOR, YOU are the Medical Moniter, YOU are responsible
- AND.....
- THE buck stops at you
If you don’t know……ASK…
asking for help sucks.
(do it anyways)
Resources

• Your School, Department, Division
• CCTS
  • https://www.uab.edu/ccts/research-commons
• IRB
  • https://www.uab.edu/research/home/investigators
• OSP
  • https://www.uab.edu/research/home/osp-researchers-toolkit
CCTS Resources

- Statistical/Methodological
  - BERD
- Coordinator, Regulatory, Data
  - CRSP
- Training, Budgets, ClinicalTrials.gov
  - CRSP
- CRU, Bionutrition, Biospecimens
  - CCTS
- Recruitment
  - i2b2
- Constructive grant reviews
  - Panels
Mentorship is critical
Mentorship, Mentorship, Mentorship…

"Regardless of our title or years of experience, we can learn from each other. Through mentoring and by being open to learn we can reach our ultimate potential."

-Lily Bejámin-

Mentors are kinda like shoes...when you find good quality ones you can never have too many
The Benefits of Being A Principal Investigator
PRINCIPAL INVESTIGATOR
IT'S NOT FOR THE WEAK
Best Principal Investigator Ever and a mug to prove it
Fill in the blanks:
I need _______ so I can _______