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Meeting enrollment goals in a timely fashion is among the most substantial challenges faced by a site conducting randomized clinical research trials. In order to effectively meet the challenge, the site must prepare an effective recruitment plan prior to opening enrollment for a study. Formulating such a plan relies on three key factors: study protocol, study indication, and site budget. Data from previous similar studies can be helpful in guiding the allocation of patient recruitment funds and workload. This practicum research project applies a number of recruitment metrics proposed in the literature to the subject accrual efforts of a site management organization in order to objectively quantify performance.

RECRUITMENT STRATEGIES AND FULFILLING ENROLLMENT AT A SITE  
MANAGEMENT ORGANIZATION

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MANAGEMENT ORGANIZATION

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*For the Degree of*  
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## **Chapter 1: The Clinical Research Industry and Subject Accrual**

### **Brief History of Human Participation in Clinical Research**

When addressing the topic of an individual's potential participation in a randomized clinical trial, it is important to address the historical background of how modern clinical research came to be, as we recognize it today. Dating back to Hippocrates and the dawn of western medicine, it has been the responsibility of the physician to act in the patient's best interest. However, at that time and for thousands of years following, the patient's participation and input into the course of his or her own treatment was kept to a minimum. In those times, physicians generally believed that the patient did not know as much about their condition as the physician and thus their opinion was not medically relevant to their treatment. Through the late medieval era and age of enlightenment, new views of medical practice urged physicians to discuss treatments with patients, but with the primary purpose of inspiring confidence in the patient that the treatment would work, not necessarily to ask permission to administer said treatment (Murray, 1990). Over the last 175 years, the concept of 'informed consent' has evolved, where the patient is informed of the risks and benefits of a given treatment, and their consent is obtained prior to providing medical care. Informed consent is now a central part of enrolling a participant into a clinical trial.

Around the turn of the 20<sup>th</sup> century, a physician and scholar by the name of Albert Nessier was working on a vaccination for syphilis at the University of Breslau. The method he was investigating involved extracting serum from patients with syphilis and injecting it into patients that were admitted to the hospital for other ailments. This experiment was conducted without the patients' knowledge or consent, and when these patients (mostly prostitutes) contracted syphilis Nessier claimed that it was due to their profession, and that his 'vaccination'

was unsuccessful (Vollmann & Winau, 1996). This and other similar practices sparked widespread debate on the ethics of human experimentation, which led many countries to implement various reforms to medical research and practice. But until 1947, the world lacked an international set of medical ethics to guide medical research.

The Nuremberg Code is an influential document published in 1947, at the conclusion of “The Doctors’ Trial”, which tried and convicted over 20 Nazi doctors of heinous violations in human rights for the experimentation conducted on prisoners in war camps during the Second World War (Shuster, 1997). This set of 10 principles outlined the core ethics of conducting clinical research with human participants. First and foremost, the Nuremberg Code formalized the process of informed consent and voluntary participation without coercion, deceit, or fraud. It also declared that special consideration be taken when involving patients of diminished autonomy, like children or prisoners. Another principle of the Nuremberg code states that the human subject must have the authority to end their involvement in the study at any time, for any purpose. Although these principles were not adopted in their entirety by any country, they served as international guidelines in medical ethics that led to widespread reform in medical research (Shuster, 1997). Seventeen years later, The World Health Association formalized the fundamentals of Informed Consent and other standard research ethical principles in the Declaration of Helsinki (Stonier, 2002).

In the United States, the Food and Drug Administration (FDA) is responsible for the oversight and regulation in the development of pharmaceuticals, medical devices, vaccinations, supplements, and more. Title 21 of the Code of Federal Regulations (CFR) governs the authority and guidelines of the FDA. The federally mandated protections of human subjects participating in clinical trials are outlined in Title 45 Part 46 of the CFR. This now serves as the governing

standard of research ethics involving human participants in the United States. In addition, all pharmaceutical development must strictly adhere to these FDA guidelines when conducting clinical research. Title 45 Part 46 defines many fundamental components in the clinical research process, such as utilization of an Institutional Review Board (IRB), elements of an informed consent document, and guidelines for consenting populations of diminished autonomy (children, pregnant women, and prisoners) (FDA CFR).

### **The Clinical Research Industry**

In the process of drug development, clinical trials occur in the time between an Investigational New Drug (IND) application and before submitting a New Drug Application (NDA) to the Federal Drug Administration (FDA) by a sponsor (pharmaceutical company). An IND is approved based on data obtained from pre-clinical studies, which include information on the drug's manufacturing facility, pharmacology and drug distribution, toxicity reports, and results from animal trials. The IND also details resources and plans for conducting clinical trials with human participants, such as the Investigator Brochure, Study Protocols, and Informed Consent Forms. IND approval clears the sponsor to begin Phase I clinical trials. Following several successful Phase I-III trials the sponsor submits an NDA to seek FDA approval to market the new drug.

When a pharmaceutical company (or other sponsor) is in the process of selecting sites to conduct randomized clinical trials, they assess a sites aptitude on several levels. For example, how much experience do the participating clinicians have in conducting randomized clinical trials? Will this site be able to meet subject enrollment goals in a timely fashion? How many other studies is this site currently conducting? For the sponsor, selecting the best sites to conduct trials for a given protocol is imperative to efficient research, as each site requires a substantial



financial investment. Likewise, any delay from IND to NDA represents a significant amount of potential lost revenue in drug sales. It is generally acknowledged that two of the most significant bottlenecks in the process of drug development are delays in both meeting enrollment and study site initiation (Drennan, 2002).

The increasing industry focus on minimizing timescales and maximizing efficiency gave rise to Contract Research Organizations (CROs) and Site Management Organizations (SMOs), to potentially help streamline some aspects of the research process. At their conception, CROs were small firms hired by pharmaceutical companies that sought to outsource some of their labor intensive regulatory and managerial responsibilities to a third party. Through the 1980s and 1990s pharmaceutical companies began outsourcing more of their research, development and testing to CROs (Mirowski & Horn, 2005). From the perspective of the sponsor, a CRO can provide a number of advantageous services. For example, a CRO will handle the hiring and managing “monitors”, who make periodical visits to study sites to ensure all aspects of the study are being conducted and documented correctly. Additionally, as pharmaceutical companies continue to expand the scope of trials to include sites located in foreign countries, CROs can serve as a liaison in operating within the guidelines of both the FDA and the foreign governments. Despite these advantages, the emergence of the CRO as an integral part of the clinical research industry remains a subject of controversy (Mirowski & Horn, 2005).

While a CRO can act on behalf of the sponsor, an SMO in many ways can act on behalf of a Principal Investigator (PI) or group of PIs (Maloff, 1999). Site Management Organizations are businesses that manage clinical trials at a group of sites (usually a variety of different specialty clinics), and often handle all correspondence with the CRO and pharmaceutical company. This includes regulatory document submission, data entry, and study management. An

SMO interfaces with pharmaceutical companies (or CROs) in regards to being selected for upcoming studies, while simultaneously cultivating business relationships with the physicians and clinics that serve as the principal investigators (PI) and research sites, respectively, where subject visits occur. SMOs handle virtually all aspects of site responsibilities in conducting clinical research. The physicians that serve as PIs are often busy managing their own practices, seeing patients, reviewing safety reports and labs. SMOs allow them to participate in and oversee clinical research while still focusing the majority of their attention on their own practice. Overall, SMOs have carved their niche in the clinical research industry by offering centralized management with industry experience, contract negotiation, patient recruitment services, and a team of research coordinators to sites that wish to participate in clinical trials. These research coordinators are responsible for the majority of the day-to-day tasks related to conducting clinical trials. Responsibilities of a research coordinator include patient recruiting activities, conducting study visits, going to investigator meetings, sample collection and shipment to labs, regulatory affairs, meeting with monitors and resolving/archiving study related material when a study ends (Stonier, 2002).

For the sponsor, SMOs represent yet another means of streamlining the process of conducting of randomized clinical trials. One advantage of sites contracting a SMO is the recruitment expertise and resources that they can provide. SMOs can audit clinic medical records (termed ‘chart review’), and select a group of patients that have the highest likelihood of qualifying for a particular study. In the interest of confidentiality, it is at the discretion of the PI as to whether the SMO will be permitted to directly contact each patient in regards to the study. In addition, SMOs generally have their own databases of participants from previous studies and leads from outside advertising campaigns that can be utilized in process of subject accrual.

## **Chapter 2: Recruitment Strategies and Yield at ACRC Trials**

### **Background and Significance**

Meeting study enrollment deadlines is one of the leading causes of delays in the drug development process (Drennan, 2002; Maloff, 1999). These delays result in substantial loss of patented pharmaceutical sales for every day the drug is kept off the market. Furthermore, failure of a study to achieve enrollment goals may compromise the study's overall statistical power. In some cases, this might lead to a broadening of the inclusion criteria that could potentially undermine the validity of the study (Chin Feman et al, 2008). Thus, it is imperative that sites effectively plan for recruitment. Formulating such a plan relies on three key factors: study protocol, study indication, and site budget.

The study protocol contains the inclusion and exclusion criteria for a given study. The inclusion criteria are specified as a broad list of factors that a participant must meet to be eligible for the study. To further refine a population of eligible participants, the exclusion criteria serves to disqualify potential subjects that are unsuitable for the trial for safety or regulatory reasons (Wright et al., 2006). In general, the result of these combined criteria is to define and quantify the members of the target patient population for a particular study (Stonier, 2002).

The three studies evaluated for this practicum project targeted three different constipation-related study indications, each with a different potential source of constipation: Chronic Idiopathic Constipation (CIC), Irritable Bowel Syndrome with constipation (IBS-C), and Opioid Induced Constipation (OIC). In general, constipation is characterized by difficult passage of stools, infrequent passage of stools, or sensation of incomplete evacuation (Epstein, 2009). Chronic Idiopathic Constipation is characterized by a history of constipation (in excess of 6 months) that has no other known diagnosis that accounts for the symptoms. Idiopathic is a

medical term applied to conditions that arise spontaneously and have no known underlying cause. For this reason, in the CIC study other potential diagnoses (including IBS-C and opioid use) were exclusionary. Irritable Bowel Syndrome is diagnosed using Rome III criteria for IBS, which includes recurrent abdominal pain, or discomfort that is associated with changes in stool frequency and appearance (Longstreth et al.,2006). IBS may present as different subtypes determined primarily by stool frequency and consistency. IBS-C (constipation) is characterized by infrequent bowel movements with hard or lumpy stools. IBS-D (diarrhea) presents with frequent bowel movements and loose stools. Additional subtypes include IBS-M or IBS-A for mixed or alternating, respectively (Longstreth et al., 2006). Opioid Induced Constipation (OIC) is a well-documented side effect of long-term opioid therapies use for the treatment of chronic pain. Around 40% of all patients treated with medications in the opioid family report experiencing significant constipation (Camilleri, 2011).

Also contained within the exclusion criteria are any prohibited medications that (as the name implies) are not to be taken while participating in the study. These medications may be contraindicated in conjunction with the investigational therapy as a possible safety concern. Also, medications that may interfere with the assessment of drug efficacy must be discontinued prior to study participation. For example, in the constipation studies the subject must only use the laxatives provided in the study, since any over-the-counter remedies could skew the data collected during the study.

A significant factor in the formulation of a site's recruitment plan is how much of the study budget can be allocated for subject accrual efforts. The portion of the study budget to be utilized for recruitment is usually outlined in the site's contract with the sponsor. For the sponsor, maximizing recruitment efficiency is necessary to meet enrollment deadlines. If

recruitment funds are depleted during the enrollment period, a site may request additional recruitment funds if they can justify how it will help in the subject accrual. Additionally, some pharmaceutical companies offer bonuses to the site for completed chart review.

While there is significant incentive to maximize recruitment efforts, recruitment efforts and yield are not traditionally widely tracked or reported by study sites (Wright et al, 2006). This may be due to a lack of standardized metrics to gauge the effectiveness of an individual site's recruitment efforts. Ideally, the collection and recording of such data would benefit both the sponsor and the site to obtain an accurate estimation of both the progress and effectiveness of particular recruitment campaigns. For the purposes of this practicum report, several recruitment metrics proposed in the literature were applied to the recruitment strategies of Advanced Care Research Center (ACRC) Trials, a Site Management Organization (SMO).

### **Specific Aims**

ACRC Trials is an SMO that specializes in conducting Phase II-IV clinical trials across a network of investigator sites. Because of their centralized management and recruitment expertise, SMOs are an attractive option for sponsors when selecting study sites. The process of reaching a target population for a given study, determining eligibility, and enrolling subjects into a clinical trial is termed 'subject accrual'. The subject accrual process consists of four stages: prescreening, screening, randomization (enrollment), and study completion. Recruitment primarily involves the prescreening and screening stages and precedes enrollment. Because delays in meeting subject enrollment goals are among the most significant bottlenecks in the drug development process (Drennan, 2002), it is essential for a site to effectively plan for recruitment. Reviewing data from previous recruitment efforts could be helpful when formulating such a plan. For example, estimating of the number of prescreened potential

participants necessary to achieve enrollment goals allows for efficient allocation of study funds and manpower towards the recruitment process. The current recruitment practice at ACRC Trials does not define a ‘prescreening goal’ to match enrollment goals. Instead, recruitment efforts are primarily determined by site budget and site staff workload. The broad objective of this practicum project is to aid in planning for budgets and workflow by utilizing metrics that provide objective feedback related to efficiently setting and achieving recruitment goals.

**Aim 1: Compare referral trends across three constipation trials by comparing the proportions of target populations that come from four origins of referral: clinic patients, previous study participants (from ACRC Trials’ database), outside advertisement, and patient-to-patient referral.** Each patient’s origin of referral is recorded into the Clinical Conductor software database program when a subject completes the phone-prescreening questionnaire for a particular study. These prescreened subjects come from a variety of sources that can be grouped into four main ‘origin of referral’ categories. As an SMO, ACRC Trials maintains the in-house Clinical Conductor database of former participants and potential subjects who have expressed interest in participating in clinical trials. ACRC Trials sends out monthly email blasts with information on all current studies to the individuals recorded in Clinical Conductor. During the recruitment process Clinical Conductor is utilized to generate call lists based on reported history of a given study indication. Potential subjects contacted through these call lists, or that contact ACRC Trials after receiving the email blast are grouped into the ‘ACRC Database’ category of subject origin of referral. The investigator sites that ACRC Trials partners with are usually clinic-type practices with extensive Electronic Medical Records (EMR). The EMR system can be used to perform chart review to select potentially eligible patients to contact

in regards to a current study. Additionally, the EMR system allows ACRC Trials to look at the clinic's schedule each day to see if any potentially eligible participants have appointments scheduled that day. With their primary care physician's approval, an ACRC Trials representative will approach the patient to provide more information about the study and to assess general eligibility. Occasionally, clinic employees will be interested in participating in the study (if the study protocol permits their inclusion). Clinic patients and employees are grouped as an origin of referral for the purposes of this analysis. ACRC Trials offers a \$50 referral bonus to any individual that refers a qualified applicant to one of their studies. This encourages spread of information by word-of-mouth about current studies. The origin of referral for subjects who are referred to ACRC Trials by a friend are categorized as 'Referral: Friend' for this analysis. ACRC Trials also uses several paid advertising mediums to raise awareness about current studies. The origins of referral for participants that learn of the study through one of these advertising campaigns are grouped as 'outside advertisement'. Two of the studies analyzed here (CIC study and OIC Study) are still actively enrolling subjects and thus the data presented reflects the most current information at the time of this report.

**Aim 2: Quantify collated subject accrual process data in terms of fractions that provide metrics on the different stages: eligibility fraction, enrollment fraction, and recruitment fraction.** Several strategies are used by ACRC Trials in the recruitment efforts for the constipation studies. The recruitment metrics defined by Gross et al. (2002) are utilized to assess the recruitment efforts. The proportion of all patients that undergo prescreening for the study that meet inclusion and eligibility requirements and enter the screening period is termed the "eligibility fraction." The proportion of those that enter screening that actually proceed to enroll

in the study (randomize) is termed the “enrollment fraction.” The “recruitment fraction” is the product of the eligibility and enrollment fractions. It represents the proportion of prescreened potential participants who actually enroll in the trial (Gross et al., 2002). The significance of each of these ratios in the context of ACRC Trials is assessed. However, since some of these studies are still in active enrollment, the data used to assess each trial’s recruitment progress is necessarily limited to where it stands at the time of this report.

**Aim 3: Compare the relative success of different advertising mediums in terms of effectiveness and cost.** For an SMO, attracting potential participants from outside the clinic is important both for fulfilling enrollment in a timely fashion as well as expanding the patient database. Even if a responder to an advertisement does not end up qualifying for a particular study, their information and indication of interest will be stored for future recruitment efforts. Furthermore, having an accurate representation of which mediums prove the most cost-effective is valuable on an organizational level when determining budget allocation for future studies of a similar nature.

Three different measures of advertising effectiveness will be applied to the data collected from the advertisement campaigns for the three constipation trials. The ‘prescreen rate’ describes how many responders to a particular advertisement actually complete prescreening. Chin Feman et al. (2008) term this ratio the ‘enrollment rate’, in the context of this practicum project this nomenclature may cause confusion and thus we substituted the term ‘prescreen rate’. Next, the ‘cost per prescreen’ is a basic measure of cost effectiveness that is calculated by taking the average cost for a typical advertising outlet on a given medium (newspaper or internet) and dividing by the average number of prescreened participants that were reached via that advertising



medium. Lastly, the Efficacy Index of each advertising medium will be calculated. This metric proposed by Chin Feman et al. (2008) takes into account both the fractional cost of a given advertising outlet and the fractional yield of prescreened participants. By taking both of these factors into consideration, this measure provides an index that reflects both the relative cost of an advertisement and its fractional contribution towards enrollment.

## **Materials & Methods**

ACRC Trials manages a variety of studies, each with different sponsors, CROs, centralized Institutional Review Boards, study indications, and Principal Investigators. These management functions require meticulous record keeping and centralized data management. To help with this, ACRC Trials utilizes a database system called Clinical Conductor. All members of the research team use this software for many aspects of site management, including recruitment, visit scheduling, subject payment, and tracking study enrollment. The Clinical Conductor software also contains a database of all former participants in studies conducted through ACRC Trials. Clinical Conductor was instrumental for gathering the research data for this practicum report as it tracks patient referral source, cost and scope of advertising campaigns, and subject study status. When actively recruiting for a study, Clinical Conductor generates call lists. These call lists are created by running reports on ACRC Trials' database. For example, to help with locating eligible participants for the constipation study, Clinical Conductor produced a report listing everyone in the database that had previously participated in a constipation study. Patients' reported medical conditions are also recorded onto Clinical Conductor, to support reporting based on histories of a specific indication.

As an SMO, ACRC Trials partners with various clinics that serve as the sites for conducting patient visits. These clinics are often the practices of the Principal Investigators.

ACRC Trials is currently conducting trials with seven different investigator sites in the Carrollton, Plano, and Austin area. While partnering with a clinic to conduct the study ACRC Trials is usually granted access to their Electronic Medical Records (EMR) system to search for potential participants. This process is termed chart review.

The ultimate goal of recruitment is to find and contact potential participants to further assess their general eligibility. This process is often termed “prescreening”. Prescreening at ACRC Trials involves taking the patient through a brief study synopsis and phone-screening questionnaire. The phone-screen questions are written to reflect the study inclusion/exclusion criteria. Later, a more thorough assessment is done when the patient comes in for a screening visit. Gathering a large pool of prescreened participants is necessary for timely achievement of enrollment goals as a portion of these subjects will be lost in the subject accrual process due to no-shows, non-qualifiers, screen failures, or dropping out of the study.

The Clinical Conductor software was used for collecting information on the origins of referral for prescreened subjects, as well as the status of each of these potentially eligible participants (screened, screen failed, enrolled, completed, etc.). This information was used for the calculation of the subject accrual fractions. These fractions were calculated with the averaged values across sites, and these averaged values have an accompanying standard error associated. When applying a mathematical function to values with a known standard error (like division) this error must be propagated to give a new standard error. Calculation of this new propagated error is crucial for the proper calculation of the statistics used in this report. A summary of the methods used in calculating this propagated error is presented in Appendix B.

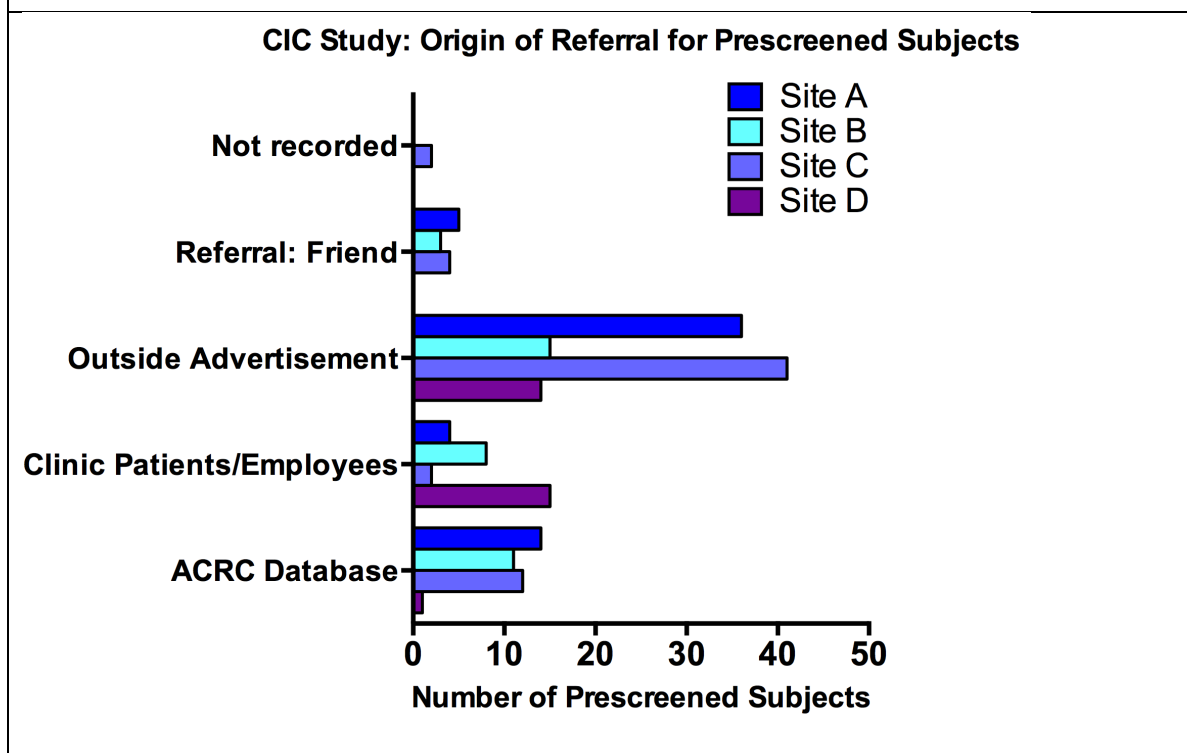
Information used in the cost-effectiveness analysis portion of this report was also collected using the Clinical Conductor software, which tracks the cost and responses to each

advertising medium. This data was used to calculate the prescreen rate, cost-per-prescreen, and efficacy index.

## Results

**Aim 1: Compare referral trends across three constipation trials by comparing the proportions of target populations that come from four origins of referral: clinic patients, previous study participants (from ACRC Trials’ database), outside advertisement, and patient-to-patient referral.**

Figure 1.1 – CIC Study: Origin of Referral for Prescreened Subjects



For the CIC study, a total 187 subjects were prescreened across four investigator sites managed by ACRC Trials. Figure 1.1 illustrates the origins of referral for these prescreened subjects. This view provides an overview of where the eligible (prescreened) participants came from at each site. Site D is a new location that ACRC Trials recently opened in the Austin area. This is the first ACRC Trials investigator site located outside of the Dallas/Fort Worth metroplex, so the ACRC Trials database has been of limited value in regards to recruitment at this site. This

location will certainly aid ACRC Trials in expanding the research database to include potential participants in this new region to assist in future recruitment efforts.

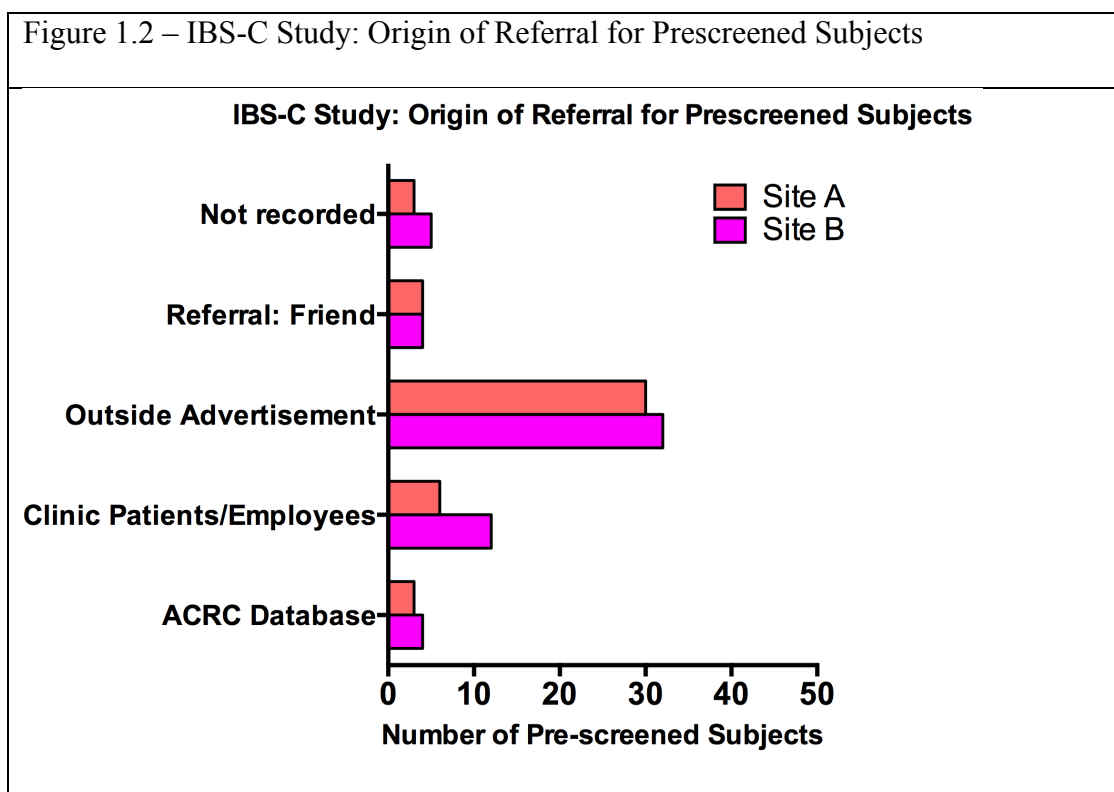


Figure 1.2 provides an overview of the origins of referral for the 103 total prescreened participants in the IBS-C study. Although the number of sites was limited for this study, it is clear that outside advertisement was a substantial contributor to overall study interest. It also appears that chart review aided Site B’s recruitment campaign.

Figure 1.3 – OIC Study: Origin of Referral for Prescreened Subjects

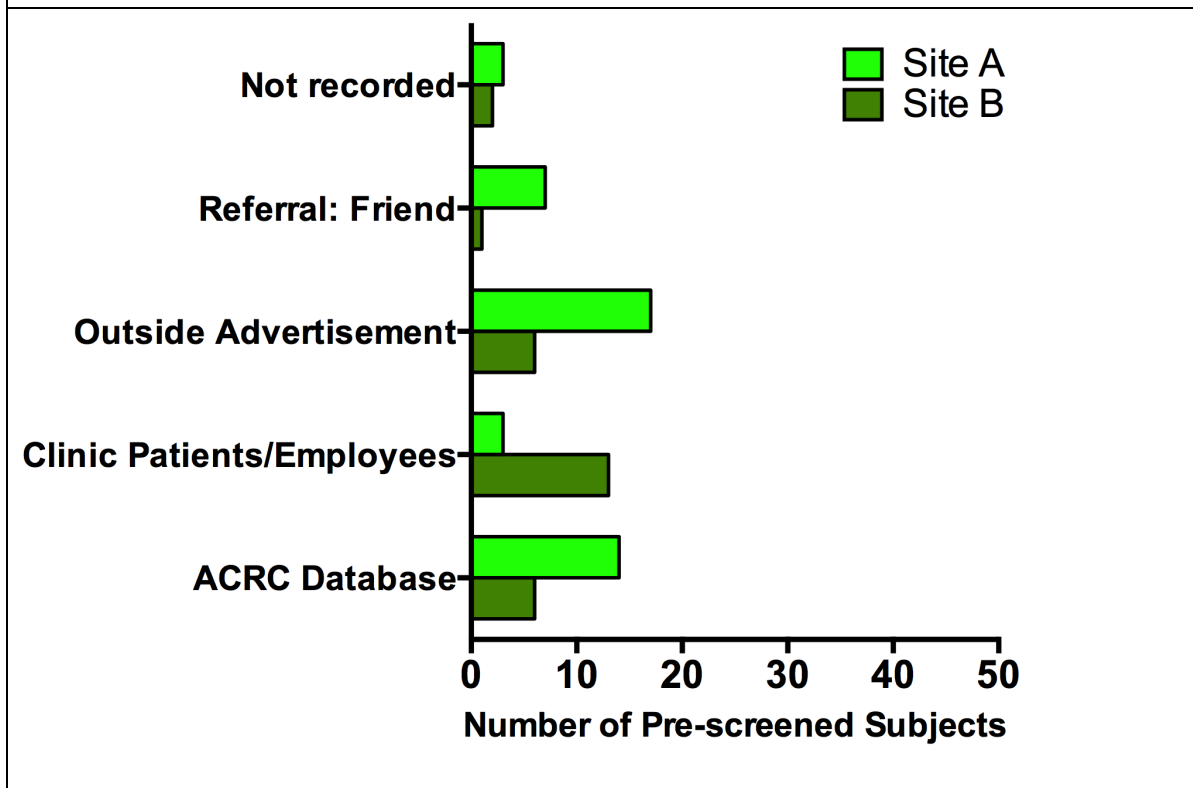


Figure 1.3 illustrates the origin of referral for the 79 prescreened subjects for the opioid induced constipation study. The inclusion/exclusion criteria for this study required that subjects be on some form of long-term opioid therapy for pain management. Many were determined ineligible at the phone-prescreening questionnaire based on the details of their opioid therapy regiment. Outside advertisement and the ACRC database have been useful in recruitment at site A. In contrast, chart review was responsible for the most number of prescreened subjects at site B. Chart review and the ACRC Trials database contain details about current medications, thus reports can be generated based upon whether the subject is known to be taking a relevant opioid therapy.

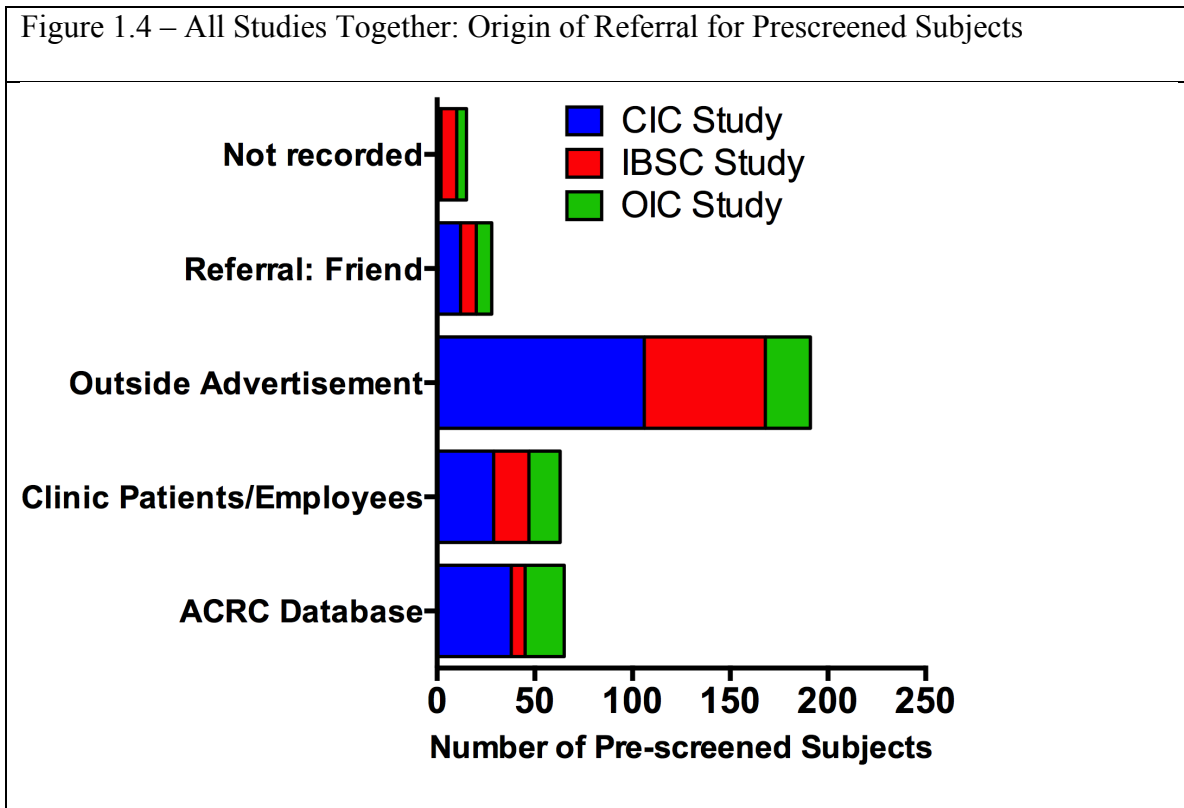
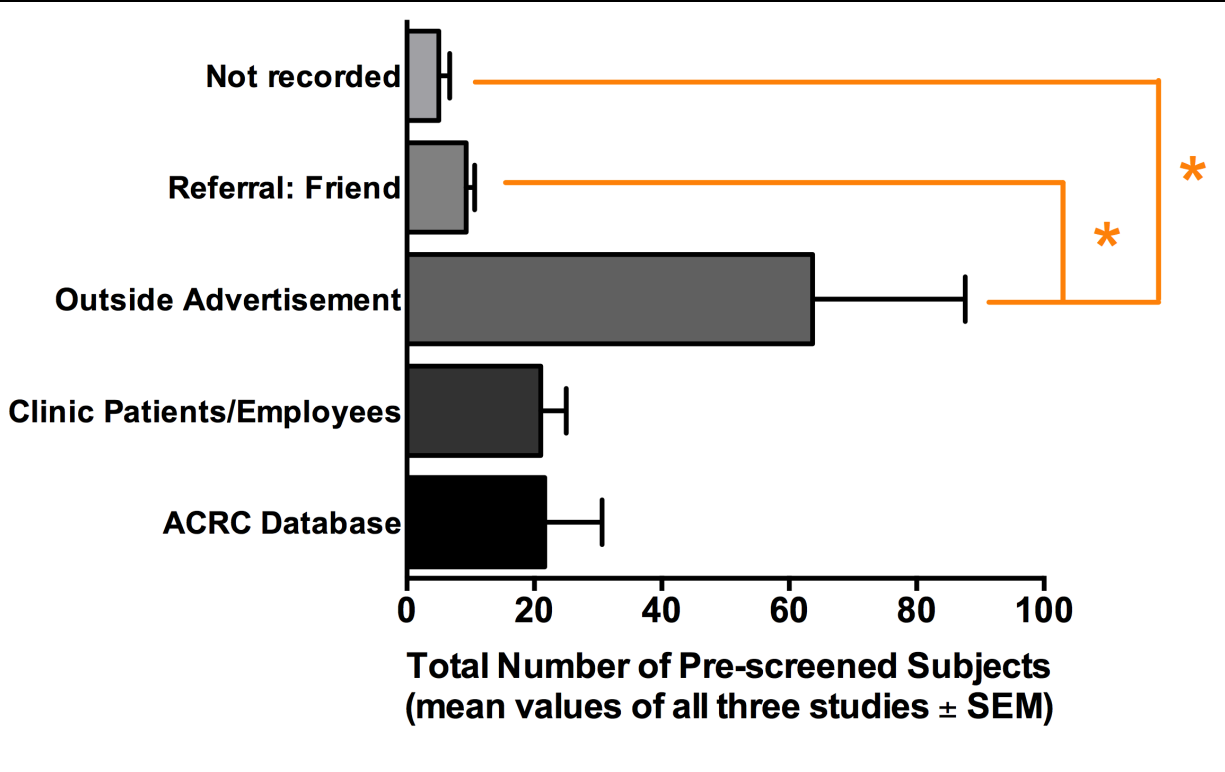


Figure 1.4 combines the previous three figures into one graph that illustrates the origin of referral totals for each category across all three constipation studies. Again, this illustrates the sizeable contribution of advertisement towards achieving enrollment goals in each study. In fact, outside advertisement accounted for more prescreened subjects than all other origins of referral combined. Clinic patients and ACRC Database accounted for similar amounts of the overall prescreening pool for these studies.

Figure 1.5 – All Studies Averaged: Origins of Referral (\*  $p < 0.05$  by one-way ANOVA analysis and a Tukey post-hoc analysis)



Next, the origin of referral totals across all studies were averaged and compared to assess whether any significant differences were present (Figure 1.5). A one-way ANOVA was performed that indicated that a significant difference ( $p = 0.0344$ ) does exist between the means of the origins of referral. To determine between which variables the significant difference was present, a Tukey’s multiple comparison test was performed. This indicated that a significant difference was present between “outside advertisement” and “referral: friend” (indicated with orange asterisk) with outside advertisement resulting in significantly more referrals in all studies – approximately six times as many. It also indicated there was a significant difference present between “outside advertisement” and “not recorded”, however this is somewhat expected as ‘not recorded’ is a measure of how many prescreened subjects’ origin of referral were not recorded during the prescreening process.

**Aim 2: Quantify collated subject accrual process data in terms of fractions that provide metrics on the different stages: eligibility fraction, enrollment fraction, and recruitment fraction.** Once potential participants have been prescreened, they are scheduled for screening visits at the study site. During a screening visit, a more in-depth assessment of the patient's eligibility is performed. If it is determined that the patient is a good candidate for study participation, they will sign the informed consent form and enter a screening period. The screening to randomization (enrollment) timeframe varies, depending on the study. In the case of the constipation studies, at the screening visit the subject is provided with a diary to track symptoms and bowel movements for between two and three weeks. After this time period the patient will come in to be randomized or screen failed based on the information collected in their diary. Additionally, blood and urine samples are obtained at the screening visit and must be reviewed by the PI prior to enrolling in the study (randomization). If any clinically significant abnormalities are found in the lab work (such as abnormal liver or thyroid values), the patient will be a screen failure and will not be enrolled in the study. The eligibility, enrollment, and recruitment fractions (referred to collectively as 'subject accrual fractions') provide insight into each step of the trial participation process.



Figure 2.1 – Eligibility Fractions.  $p > 0.05$  between each study by one-way ANOVA and Tukey post-hoc analysis.

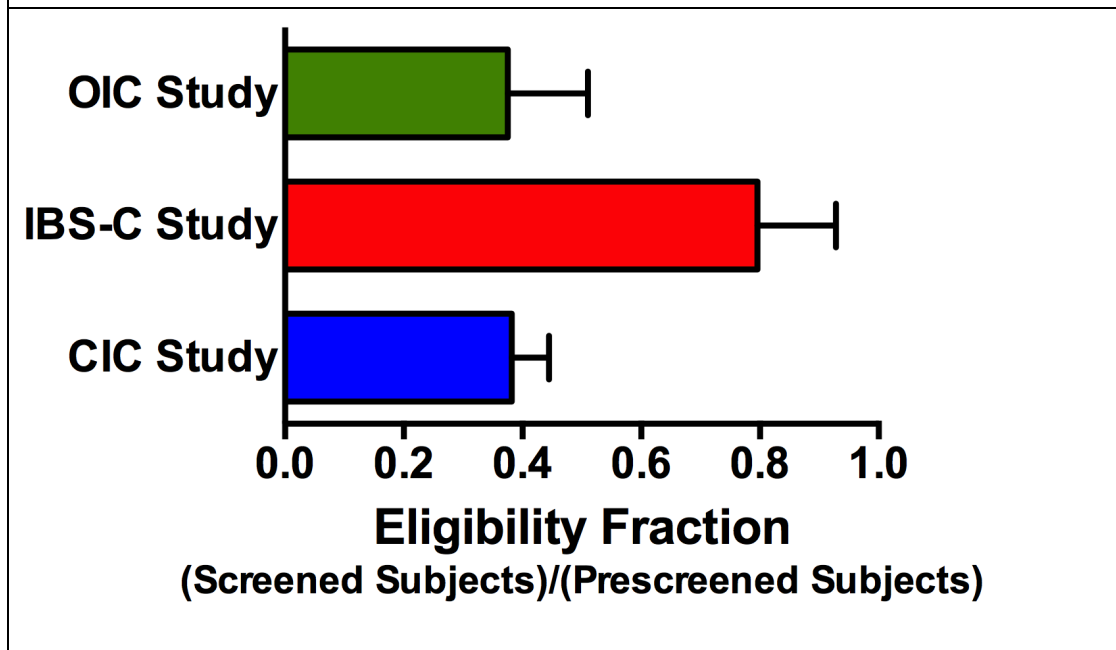


Figure 2.1 depicts the eligibility fractions calculated for the three constipation trials. This proportion represents how many subjects, of all those that were prescreened, actually came to their scheduled screening visit, were determined to be eligible, signed the informed consent and entered into the screening period. A ratio equal to 1.0 would indicate that every potential participant that passes the phone-prescreening questionnaire showed up for their scheduled visit and was determined to be study eligible. Prescreened potential participants that do not show up for the screening visit are termed ‘no-shows’. Those that are determined ineligible at screening before signing Informed Consent are designated “Non-Qualified”, and do not enter the screening period. The information that determines subject eligibility prior to signing Informed Consent generally comes from the paperwork ACRC Trials requires a new subject to fill out prior to the first visit, which requires the patient to provide a detailed medical history including current medications. A one-way ANOVA test was performed on the eligibility fractions across these three studies, and it no significant differences were found between studies due to the high

variance across sites. However, the IBS-C Study (Eligibility Fraction = 0.80) clearly had a greater proportion than both the CIC Study (Eligibility fraction = 0.38) and the OIC Study (Eligibility fraction = 0.38), which had equivalent fractions. It can be inferred that the IBS-C Study had fewer no-shows and non-qualifiers than the CIC and OIC studies.

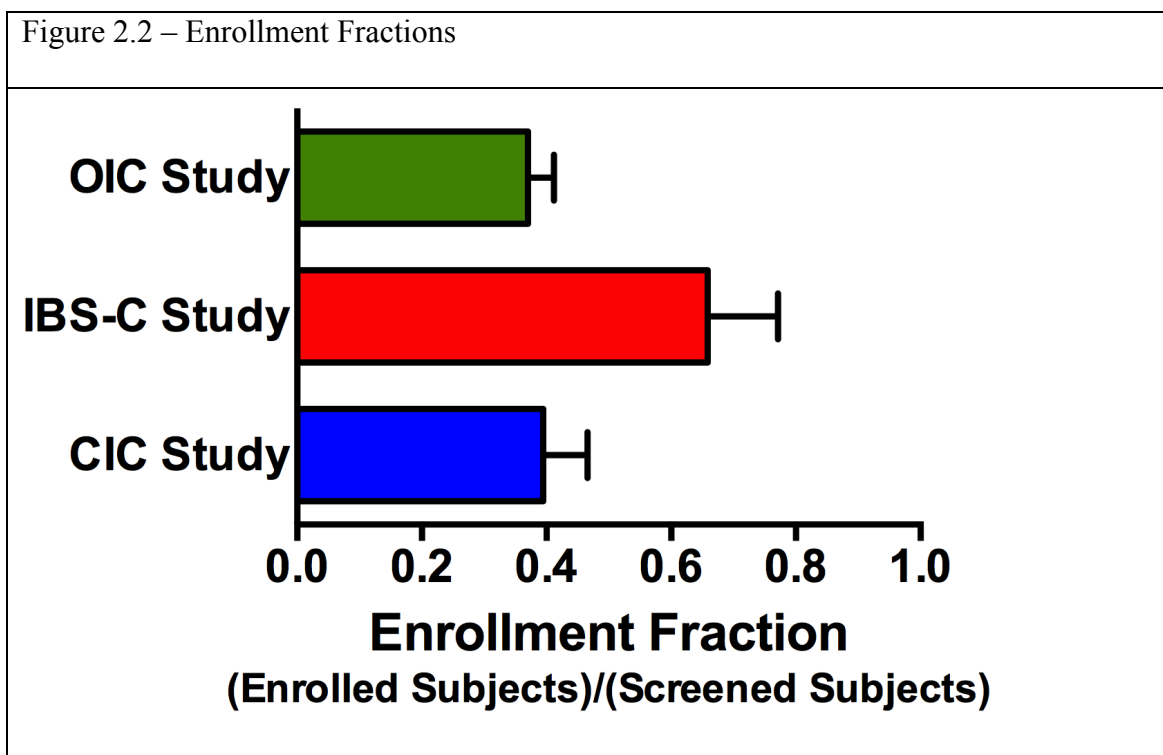
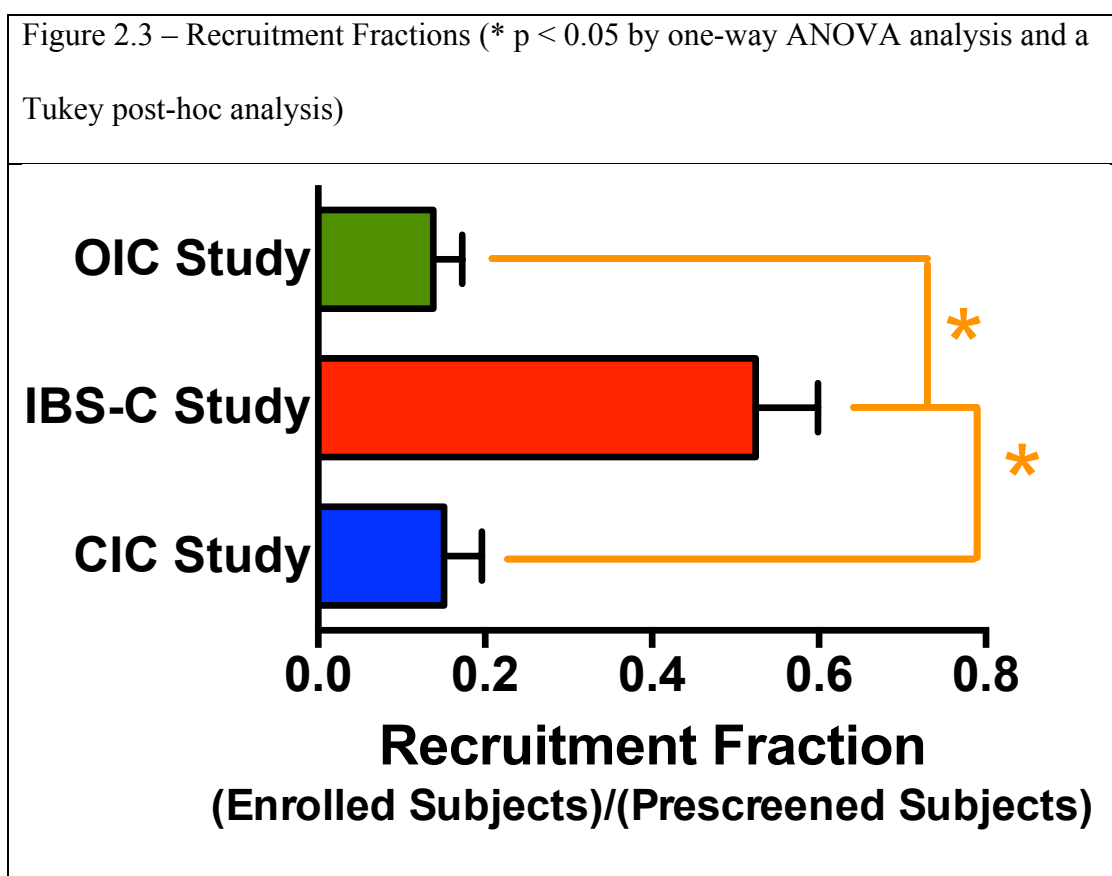


Figure 2.2 illustrates the enrollment fraction for each of the constipation studies being evaluated. This fraction represents the number of subjects that enroll (randomize) into the study at the end of the screening period. Upon enrollment, subjects are randomly assigned Investigational Product (IP) or placebo (i.e. randomization) and enter the treatment phase of their study participation. The discrepancy between these two values (subjects screened and subjects enrolled) can be primarily attributed to subjects that screen fail. For this study, the subject is given an electronic diary to track their symptoms and assess the severity of their condition at the screening visit. The subject's diary compliance and eligibility is assessed at the first follow-up visit, where they will be either enrolled (randomized) or screen failed. Most site-sponsor study

contracts outline the ratio of screen failures that are deemed acceptable for a given study. For the constipation trials evaluated in this report, the screen failure rate was up to two screen fails for every one enrollment (randomization). This implies that ideally the enrollment fraction should be greater than 0.5. The IBS-C Study had an enrollment fraction = 0.66. This means that more than half of all subjects screened went on to enroll (randomize) in the trial. In contrast, the other two studies had lower enrollment fractions with the CIC study having an enrollment fraction of 0.39, and the OIC study having an enrollment fraction of 0.37. A one-way ANOVA was performed on this data set. It was determined that no significant differences are present between these values due to the high variance between sites.



The recruitment fraction is the proportion of all subjects that are prescreened that end up enrolling (randomizing) in the study. The recruitment fractions for the three constipation studies are displayed in figure 2.3. This fraction is the product of the eligibility and enrollment fractions,

and reflects the cumulative effect of all the factors that influence the other fractions. This number represents how many prescreened subjects were necessary to yield a given number of randomized subjects. It was calculated that the IBS-C study had a recruitment fraction of 0.52, over three times that of the CIC and OIC studies which had fractions of 0.15 and 0.14, respectively. A one-way ANOVA was performed on the data in Figure 2.3 and it was determined that a statistically significant difference was present between these fractions ( $p=0.0090$ ). A Tukey's multiple comparisons test was then performed to establish which variables exhibited a statistically significant difference compared to the other variables. It was determined that the recruitment fraction for the IBS-C Study was significantly different than the recruitment fractions for the OIC and CIC studies (illustrated by orange asterisks).

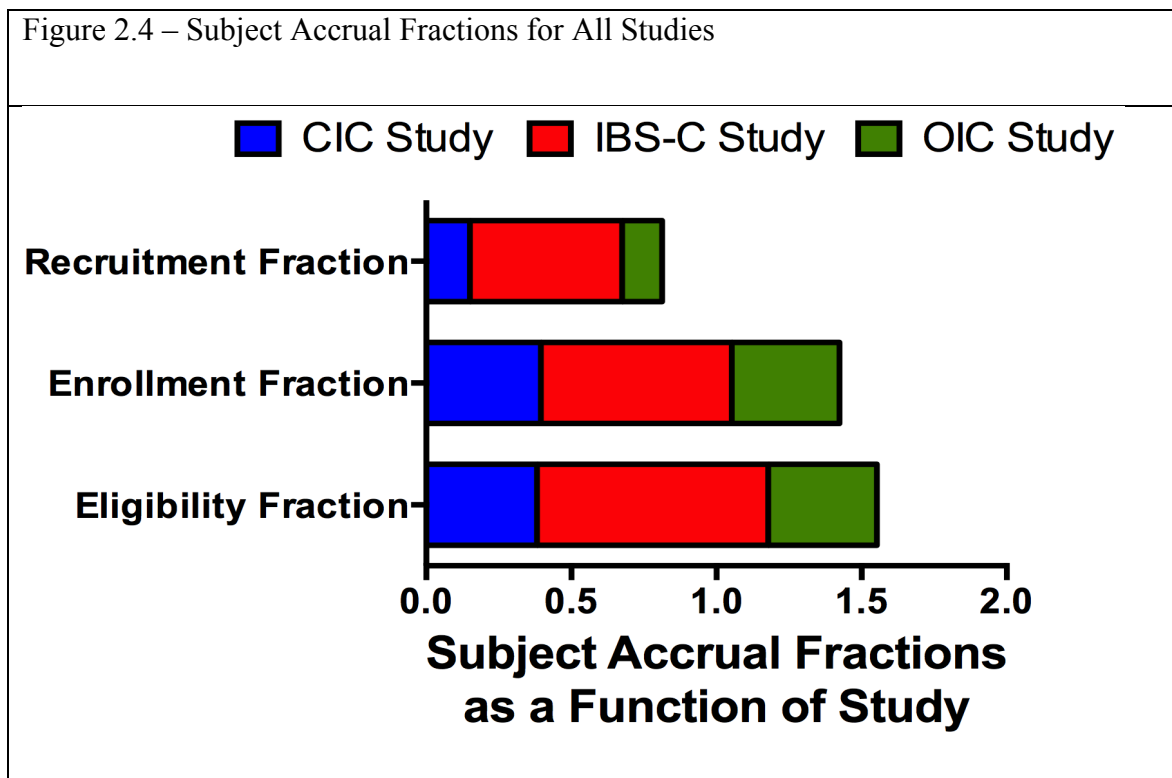


Figure 2.4 shows the combined subject accrual fractions across all three constipation trials. The IBS-C study had superior subject accrual indicators across all stages compared with the CIC and

OIC study. This suggests that enrollment for the IBS-C study was overall less challenging than for the other two studies.

**Aim 3: Compare success of different advertising mediums in terms of effectiveness and cost.** A number of different advertising outlets were utilized to raise community awareness about current studies at ACRC Trials. These advertisements were distributed via two primary mediums: newspapers and the Internet.

These advertisement mediums generated a number of calls. However, only a fraction of those responders proceed to successfully prescreen with many being determined as ineligible by the phone-prescreening questionnaire. Others are simply calling for more information about the study and then decide against study participation for their own reasons. The proportion of all responders to an advertisement that proceed to successfully prescreen for the study we termed the ‘prescreen rate’, which is equivalent to what Chin Feman et al. (2008) refers to as the enrollment rate though we do not use his term because we find it to be misleading in the context of this practicum report.

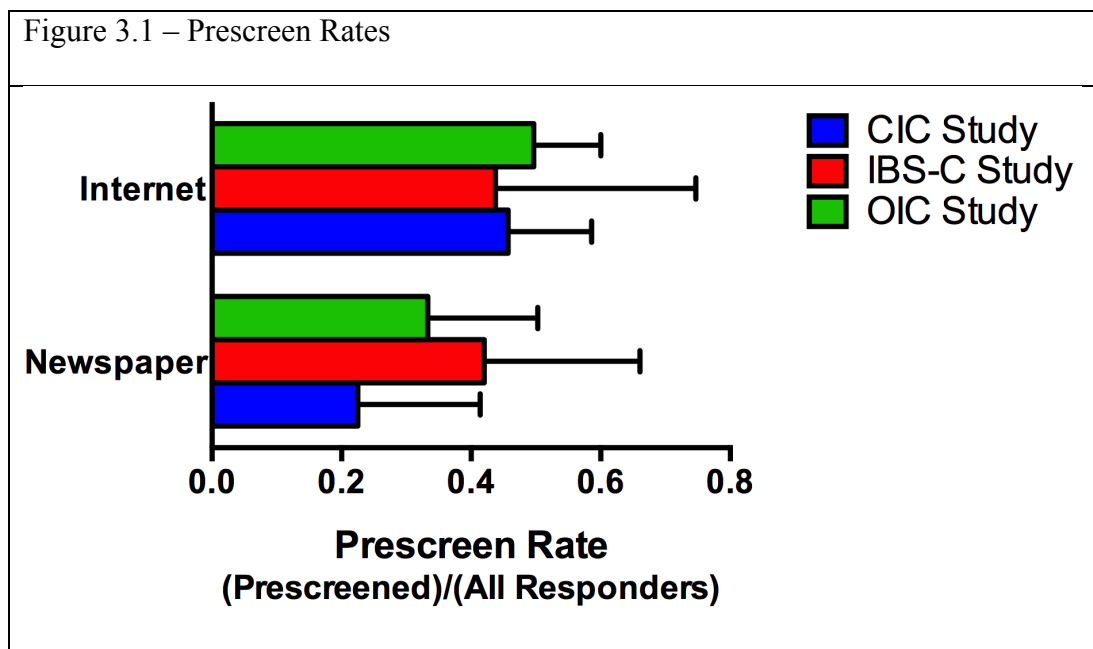


Figure 3.1 depicts the average prescreen rates of the primary advertisement mediums used by ACRC Trials for the three constipation trials. A one-way ANOVA was performed on the data presented in figure 3.1 and it was determined that there is no significant difference in prescreen rate across studies or mediums. However, it is apparent that for any given number of responders, less than half will successfully prescreen.

Another way of looking at the data for advertisement effectiveness is by calculating the average cost of each advertising outlet within a given advertising medium and dividing it by the average number of potential participants that successfully prescreen due to that advertisement. This calculation provides an estimate of how much of money was invested into a particular advertising medium per potentially eligible subject.

Figure 3.2 – Cost Per Prescreen

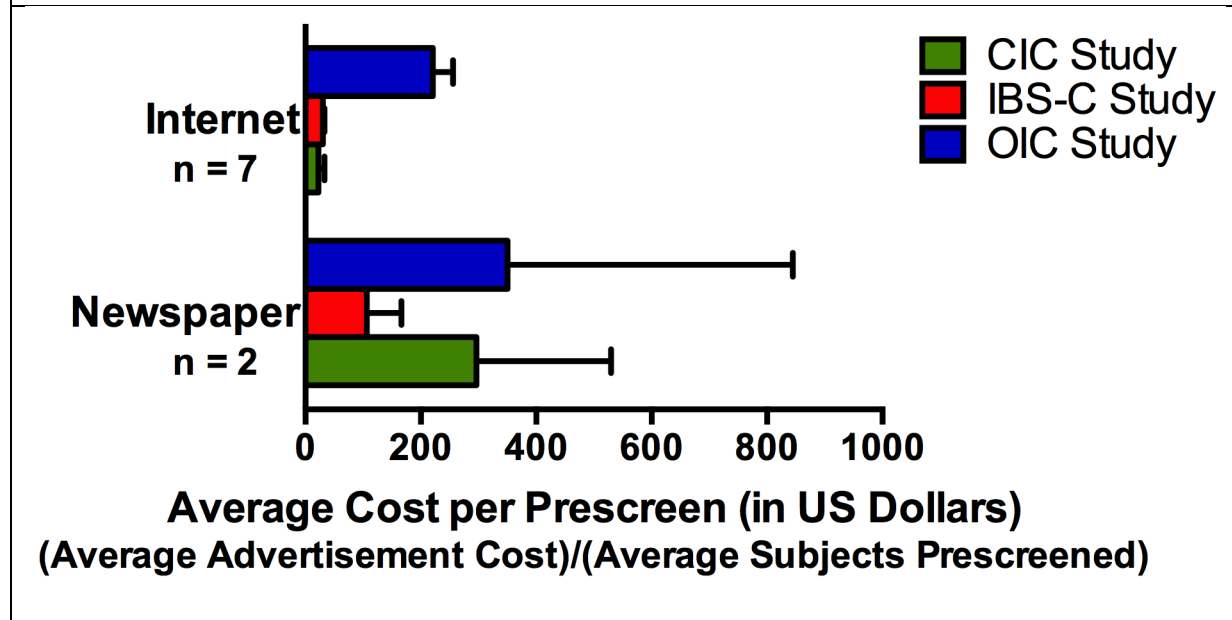
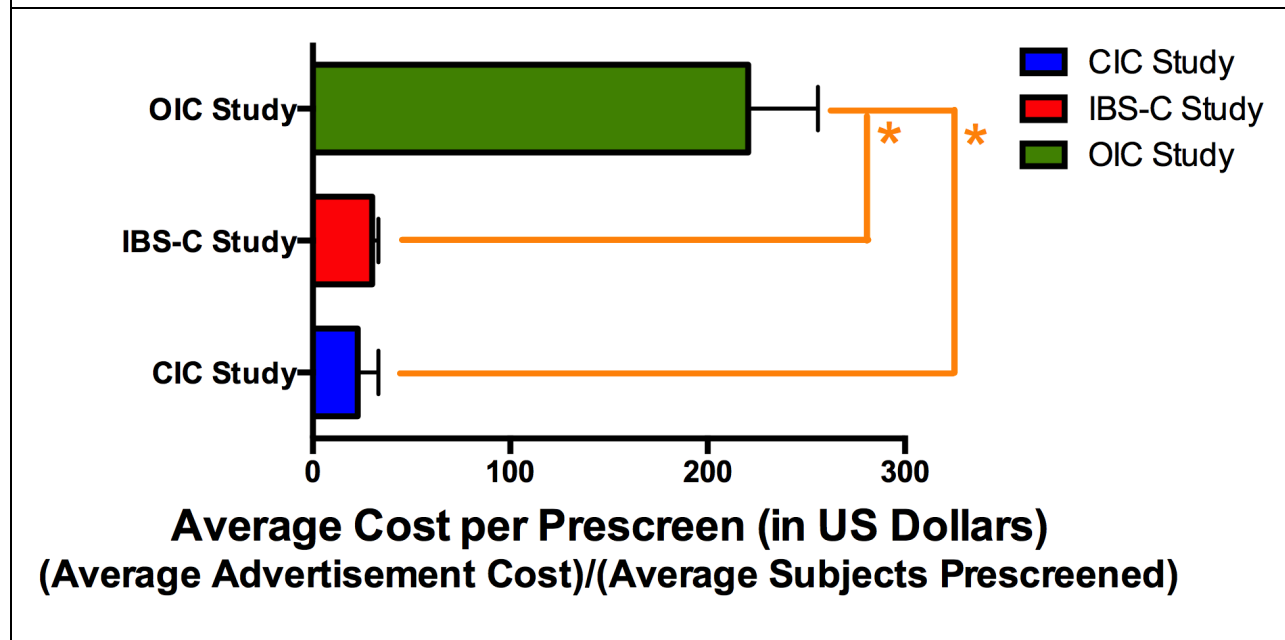


Figure 3.2 provides a depiction of the average cost per prescreen of each advertising medium with regards to the three constipation studies. In general, Internet based advertisements have a lower cost per prescreen. Due to the large variance in data and small sample size, an ANOVA test for significant difference indicated that there was no statistically significant differences amongst the average cost per prescreen across the advertising mediums. However, a difference between studies is suggested between the Internet mediums alone. To elucidate if such a difference was present the Cost Per Prescreen for the Internet medium alone are graphed in Figure 3.3.

Figure 3.3 – Cost per Prescreen: Internet Only (\*  $p < 0.05$  by one-way ANOVA analysis and a Tukey post-hoc analysis)



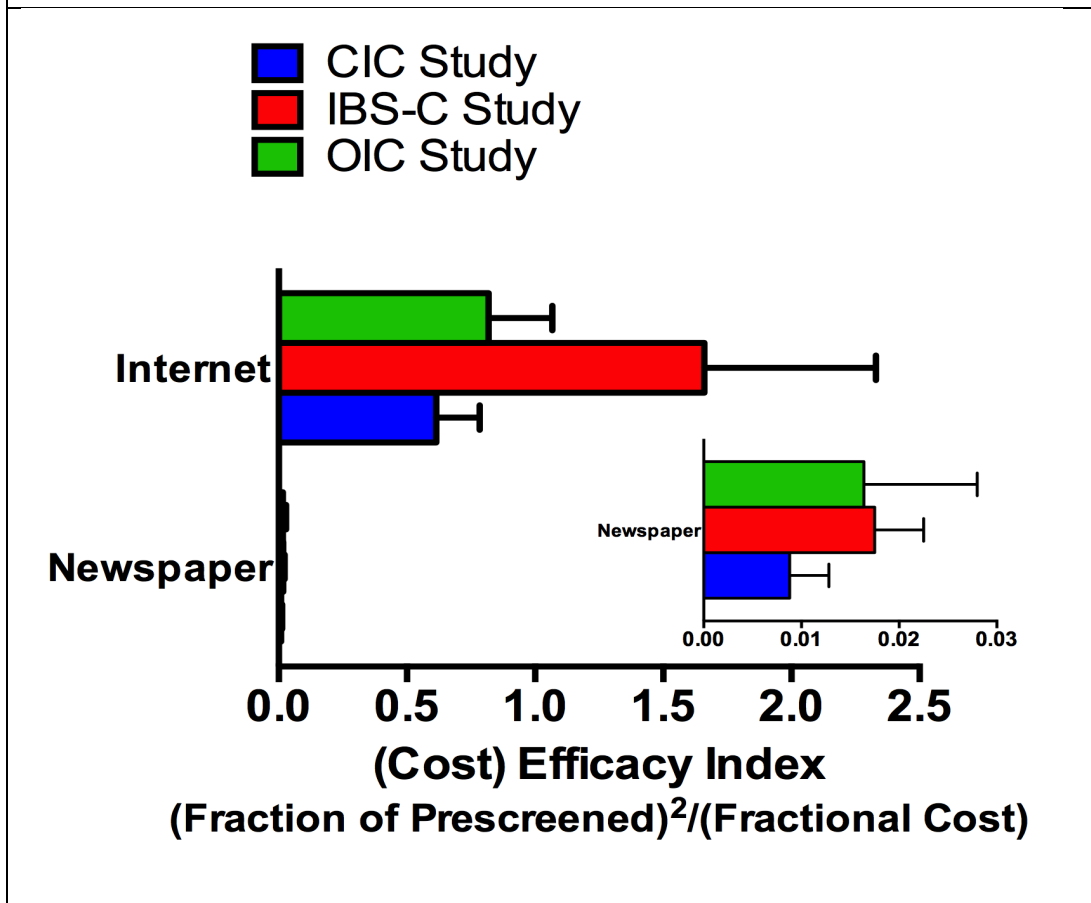
A one way ANOVA was performed on the average cost per prescreen of Internet media across studies. This indicated that there was a statistically significant difference amongst the means ( $p < 0.0001$ ). A Tukey's post-hoc analysis showed that Internet advertising for the OIC study cost significantly more per prescreened subject than the IBS-C and CIC studies. This could perhaps be due to the lower enrollment for this study in general.

Next, the Efficacy Index proposed by Chin Feman et al. (2008) was applied to the advertising campaigns for the three constipation studies. The Efficacy Index is a ratio that takes into account both the 'fractional cost' and the 'fraction of prescreened subjects' that is associated with a given advertising medium. Fractional cost is the proportion of the overall advertising budget that is allocated to a particular advertisement medium, while the fraction of prescreened subjects refers to the proportion of all the potentially eligible (prescreened) study participants that arose from a given advertisement medium. The Efficacy Index is the fraction of prescreened



subjects squared divided by the fractional cost. The mean Efficacy Indexes for newspaper and Internet based advertisements across each constipation study are displayed in Figure 3.4.

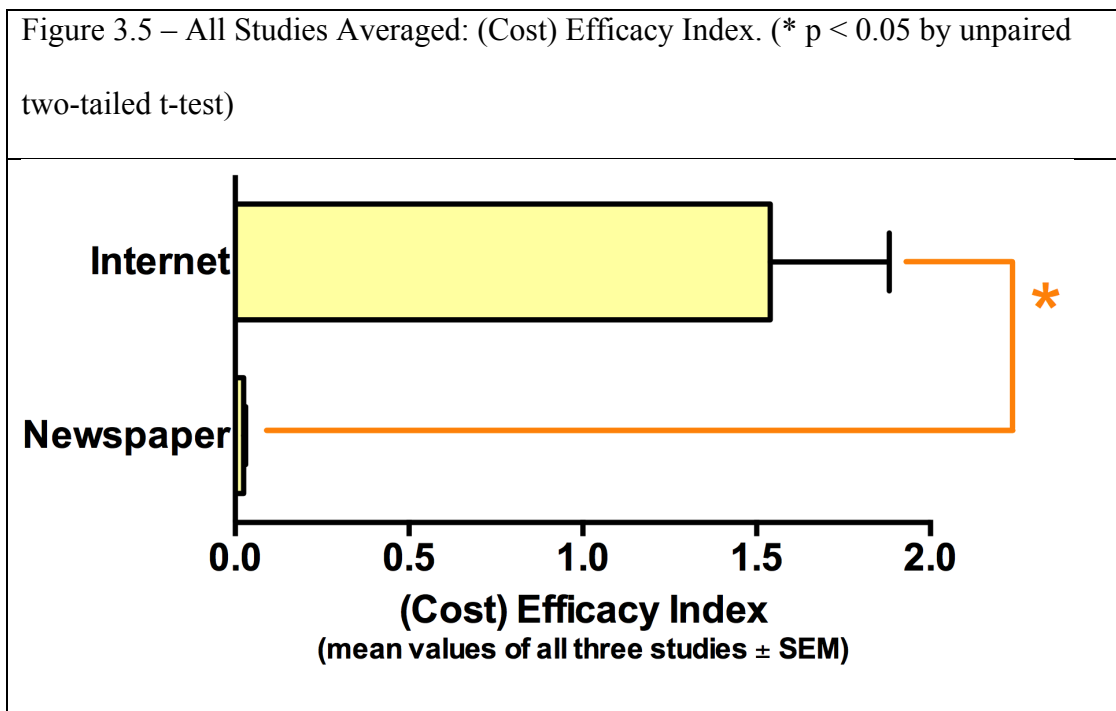
Figure 3.4 – (Cost) Efficacy Index. The inset shows the newspaper data plotted on a different scale.



Due to the large difference in scale, the newspaper-based advertising efficacy indexes for each study are magnified in the inset graph (Figure 3.4). Chin Feman et al. (2008) suggest that an Efficacy Index close to or greater than 1 indicates a recruitment method that is producing cost effective results. The internet-based advertisements for the IBS-C and OIC studies appear to be achieving this criteria.

To determine if a significant difference was present between the Efficacy Indexes for Internet and newspaper based mediums in general, the Efficacy Index values for each medium

were averaged across all three studies (Figure 3.5). An unpaired two-tailed t-test was performed that determined that there was a statistically significant difference ( $p=0.0115$ ) between the average Efficacy Index of the Internet based advertisements when compared to newspaper advertisements (indicated with orange asterisk).



## **Discussion**

The various metrics presented in this paper may prove useful for both site and sponsor. For the site collecting and reporting this data, these numbers provide instant feedback on the status and progress of studies. For the sponsor, this information (across all participating sites) could be used in the design of future studies or to determine midway how the process is progressing given the techniques used for subject accrual.

Differences in overall study design could account for some of the variation across these three studies. Enrollment for the IBS-C study proved to be less challenging than for the OIC and CIC studies on all indicators of the subject accrual process. The IBS-C Study was a fairly simple study that, out of the three studies examined, required the least from the participant. The timeframe from screening to study completion was only 1.5 months with 3 office visits in this time period. In contrast, the CIC study requires 7 visits over a 6-month timeframe and the OIC study requires 8 visits over a 5-month time period. For a potential participant, the time commitment involved can have substantial influence on their willingness to consent. Anecdotal reports of previous recruitment experience at ACRC Trials suggests that the patient's perception of the treatment being investigated also influences their decision to participate in a trial. The IBS-C Study is investigating a probiotic treatment that is added into yogurt, while the CIC and OIC studies are investigating more traditional 'pill-based' treatments. For a first-time study participant, a powder that is added to yogurt may seem like a more benign form of medication administration, even though all treatments investigated in these studies required FDA approval.

The information presented regarding the origin of a potential participant's involvement with these studies is more applicable at the site/SMO level, rather than to the sponsor. These results provide an overview of what is effective for a particular study at a particular site.

Furthermore, knowing the origin of referral distribution for the prescreened potential participants may serve to highlight which particular recruitment strategies are being under-utilized. For example in the CIC study, the Internet recruitment campaign appears to have generated the most responses and led to the highest number of prescreened potential participants. However, some sites have not completed chart review, thus more potential participants may be found within the clinic. Across all studies a significant difference was found between the number of subjects originating from outside advertisement and the number from friend referral. This implies that despite the \$50 referral bonus for referring a qualified participant, word-of-mouth is not a reliable way to fulfill subject enrollment. For ACRC Trials, attracting more patients from outside advertisement provides a method for expanding their in-house database, which helps with future recruitment efforts. For the new Austin site, advertising is imperative, as the database does not yet contain a substantial amount of patients in that region.

The study protocol is arguably the greatest influence on the subject accrual fractions presented in this report. Ultimately, the inclusion/exclusion criteria determine precisely who will be allowed to participate in a given study. Thus, the more stringent the criteria, the more potential participants must be prescreened and screened to ensure that enrollment goals are met in a timely fashion. The enrollment goals for a given site are generally outlined in the contract with the sponsor, but usually the specific randomization goals are set at the organizational level. This goal is reflective of the site's recruitment experience in similar previous studies. For the CIC study, the original enrollment goal was 8 randomized subjects per site (32 subjects across the four sites managed by ACRC Trials). As that goal is approached, high enrolling sites often increase their individual enrollment goal. The subject accrual fractions allow the site to set prescreening and screening goals to match these enrollment goals. For example, for the CIC and

OIC studies the recruitment fraction was around 0.14. This indicates that to meet an enrollment goal of 16 (8 per site), these studies would need to prescreen about 115 potential participants for each study. This information could be useful when allocating the recruitment workload amongst full-time employees. SMOs generally have access to a number of different EMR systems that contain much more complete and accurate information on a potential participants medical history than what is generally reported over the phone during a recruitment call, thus more dedicated efforts towards reviewing and contacting clinic patients could help drive up enrollment numbers if screening begins to slow.

The metrics applied to advertisement effectiveness could prove useful to the site when allocating study funds for future studies. The data on efficacy indexes indicates that on average, the newspaper-based advertising mediums are significantly less cost-effective than the Internet-based mediums. This is most likely due to an overall cultural shift away from printed media; fewer people read the newspaper daily. In general, newspaper advertisements cost more and yield less prescreened participants than the internet-based advertisements. Anecdotal reports suggest that more sponsors are opting to conduct their own central recruitment campaigns including nationwide television and radio advertisements. These prompt an interested viewer (or listener) to call a '1-800' number that redirects their call to the nearest investigator site. Television and radio advertisements are often too expensive for an individual study site to afford, so these sponsor-initiated campaigns have helped broaden the scope of the overall recruitment effort. In the future, sponsors may opt to employ similar tactics to Internet-based central recruitment campaigns.

## **Limitations**

The primary limitation of this practicum report is that it may not be particularly generalizable to other sites and studies. ACRC Trials is a SMO, and recruitment approaches may vary compared to other sites based on their own experiences and target populations. Additionally, the three studies that were evaluated are all phase III clinical trials. Recruiting for other phases of clinical research may warrant additional considerations. Also, the statistics discussed in this report are based on solely data regarding constipation related studies. However, ACRC Trials is a multi-site, multi-study operation managing trials for a variety of study indications and the approach outlined here could be applied in those other cases.

The accuracy of the data presented in this report is dependent on accurate tracking and note taking entered into the Clinical Conductor software. Any errors or oversight in this data reporting, if frequent, might result in different statistical outcomes.

## **Summary**

- The various metrics discussed in this paper could be collected and reported by investigator sites to aid in planning future recruitment efforts or modifying existing efforts during recruitment.
- ACRC Trials recruits the majority of their participants through outside advertisement.
- It is necessary to prescreen a substantial pool of potential participants in order to reach enrollment goals in a timely fashion.
- On an organizational level, Internet-based advertisement outlets are by far significantly more cost effective than newspaper-based advertisements.

## **Conclusions**

Historically, details of the recruitment process are not usually well tracked or reported. However, this information could prove valuable both for sites, and possibly sponsors. For an

SMO, the eligibility, enrollment, and recruitment fractions give insight to the recruitment process across the current studies being conducted. Discrepancies in these subject accrual fractions across studies may encourage the site to investigate potential causes and solutions for these variations amongst studies. For example, an enrollment fraction below 0.5 indicates that there is an unusually high screen failure rate at the site. This may prompt research personnel to investigate what is causing these screen failures, and what measures could be taken by the site to better assess subject eligibility prior to study enrollment.

For the sponsor, details of the recruitment process (when gathered and reported by all participating sites) could be useful when analyzing the study's recruitment efforts after the enrollment period ends. Methods of streamlining the recruitment process are necessary now more than ever. With the advent of pharmacogenomics, there are more drugs in the development pipeline than ever before (Drennan, 2002). If a more comprehensive understanding of the subject accrual process can be achieved, sponsors will be better equipped to plan and implement realistic recruitment strategies for future multi-site clinical trials.

## **Chapter 3: Internship Experience**

### **Internship Site & Experience**

For this practicum, I completed a six-month internship with ACRC Trials, a Site Management Organization based in Plano, Texas. This company has been managing research sites in the Plano area since 2006. They conduct phase II-IV clinical trials for a variety of indications. Currently, they are conducting studies in gout, allergies, asthma, constipation, cold sores, and hypertension. The length of each study varies. ACRC Trials is always looking to add more studies to broaden the horizons of the organization. When flu season peaks, they will be managing three separate flu studies in addition to those currently being conducted.

Over the course of this internship, I gained considerable insight into the day-to-day operations of a Site Management Organization. ACRC Trials has a team of five dedicated research coordinators, a regulatory specialist, and a recruitment specialist. I worked closely with all of them throughout this internship, and spent time learning from each. One of the fundamentals to success in clinical research is relentless attention to detail. Documentation is key to all aspects of the research process. Study data is recorded onto source documentation at subject study visits. This data is then entered into the Electronic Data Collection (EDC) system. A study monitor (employed by the CRO or sponsor) will make periodic visits to the site to verify accurate data entry and that all regulatory affairs are in order. Regulatory documentation must also be properly processed, signed, submitted, and filed. The Investigator Site Binder (ISB) contains copies of all relevant documentation pertaining to the study being conducted. A detail-oriented mindset towards the work is essential to being successful and preventing additional work later.



Working within the different medical practices that ACRC Trials conducts studies with, there is significant collaboration with other healthcare professionals. The PI or a Sub-Investigator for a given study sees the patient at visits that warrant direct physician oversight. The physician also reviews the patient's labs values, EKG (or other procedure) results, and performs a physical examination. The required procedures for a particular subject visit are outlined in the "schedule of assessments" portion of the study protocol.

My experience with ACRC Trials involved a great deal of subject interaction. This was perhaps among the most personally rewarding aspects of this internship. The majority of the trials at ACRC Trials last between five and ten months and feature multiple visits within that time frame. As a subject progresses through the study you get to know them as individuals. Furthermore, there is a tremendous amount of trust involved in the researcher/participant dynamic. The subject must feel comfortable being honest about their condition and any side effects they may experience while taking the study medication. Likewise, the researcher must effectively communicate all the risks, benefits, and requirements of a particular study.

While getting to know these participants, I gained an appreciation for the different motivations people have to be a part of such a study. Some wish to be a part of the scientific process of testing a therapy that they may wish to take one day. Others have no regular healthcare, so the opportunity to be seen by a physician and receive free medical attention is a major incentive to participate in a trial. For others, the monetary compensation is the most appealing aspect of their study participation.

When working in a fast-paced research environment, effective task management is a necessity. Research Coordinators are responsible for having a comprehensive knowledge of multiple protocols simultaneously. Any mistakes made are potential protocol deviations that

reflect poorly on the site as a whole. These attributes can be used to encourage teamwork and collaboration to make sure all study operations are running smoothly.

### **Journal Summary**

The various responsibilities of a site can be categorized into two broad branches of site management: clinical and regulatory. The clinical operations are performed by Clinical Research Coordinators (CRCs). On a day-to-day scale, this involves recruitment activity, patient visits, sample collection and processing, data entry, query resolution, meeting with physicians and monitors, and correspondence with the IRB, CRO, and sponsor. Patient visits often require various procedures be performed, such as vital signs, blood draws, electrocardiograms, or spirometry. During the subject visits, CRCs must utilize Integrated Web Response Systems (IWRS) to officially screen or randomized a subject, and for dispensing Investigational Product (IP). These IWRS transactions must be documented and filed appropriately in the patient chart. Additionally, at ACRC Trials coordinators take an active role in the study close-out process. After a trial fulfills enrollment or is ended by a sponsor, it enters what is known as “follow-up”. During this phase study recruitment ceases at the site. Subjects that are currently in the study continue until their participation is complete. Subject source documentation and the Investigator Site Binder must be reviewed and completed pending a monitor close-out visit. These records must be retained on hand (in case of FDA audit) for at least five years. It is in the Standard Operating Procedures of ACRC Trials to retain these records at an offsite storage location for ten years following study completion. During this internship I participated in the close-out procedures of six different studies.

The regulatory aspect of site management at ACRC Trials involves the preparation, submission, and filing of site documentation. I worked with the regulatory specialist to process

and submit 1572 forms, financial disclosures and other site initiation paperwork. The 1572 form (also called the Statement of Investigator) is a required agreement that provides some basic information about the participating site to the FDA. Every investigator, sub-investigator, and research coordinator must be listed on this document. Financial disclosures must also be obtained for all personnel listed on the 1572. These documents are to disclose of any potential financial conflict of interest (like a financial stake in the sponsor) of the investigators. The regulatory department is also responsible for the majority of the IRB correspondence. During the study start-up phase, the IRB provides site questionnaires that must be completed prior to site initiation. These forms contain questions regarding the experience and qualifications of site personnel, details of the recruitment campaign, the demographics of the expected participant population, and details of the informed consent process. Additionally, throughout the study all new Informed Consent Forms, Protocol Amendments, and advertising materials must be submitted to and approved by the IRB before utilizing them for a particular study. Depending on the study, submission of such documentation will require communicating directly to the sponsor, or to a CRO that is acting on behalf of the sponsor.

Throughout this internship I gained experience in both the clinical and regulatory branches of research. I am confident that I can be a strong contributor to a site management team.

## Appendix A: Data Tables

### Aim 1 Data: Prescreen Subjects Origin of Referral

CIC Study					
	Site A	Site B	Site C	Site D	Totals
ACRC Database	14	11	12	1	38
Clinic Patients/Employees	4	8	2	15	29
Outside Advertisement	36	15	41	14	106
Referral: Friend	5	3	4	0	12
Not recorded	0	0	2	0	2
Totals	59	37	61	30	187

IBS-C Study			
	Site A	Site B	Totals
ACRC Database	3	4	7
Clinic Patients/Employees	6	12	18
Outside Advertisement	30	32	62
Referral: Friend	4	4	8
Not recorded	3	5	8
Totals	46	57	103

OIC Study			
	Site A	Site B	Totals
ACRC Database	14	6	20
Clinic Patient	3	13	16
Outside Advertisement	17	6	23
Referral: Friend	7	1	8
Not recorded	3	2	5
Totals	44	28	72

Study Totals Averaged					
	CIC Study	IBS-C Study	OIC Study	Mean	SEM
ACRC Database	38	7	20	21.6667	8.9876
Clinic Patient	29	18	16	21.0000	4.0415
Outside Advertisement	106	62	23	63.6667	23.9745
Referral: Friend	12	8	8	9.3333	1.3333
Not recorded	2	8	5	5	1.7321

## Aim 2 Data: Subject Accrual data

CIC Study						
	Pre-screened	Non-qualified	Screened	Screen Failures	Randomized	Dropped
Site A	61	14	19	7	10	0
Site B	39	4	19	8	6	3
Site C	63	11	20	7	9	2
Site D	36	2	18	10	5	1
Mean	49.75	7.75	19	8	7.5	1.5
StDev	14.2215	5.6789	0.8165	1.4142	2.3805	1.2910
SEM	7.1107	2.8395	0.4082	0.7071	1.1902	0.6455

IBS-C Study						
	Pre-screened	Non-qualified	Screened	Screen Failures	Randomized	Dropped
Site A	48	7	37	9	25	5
Site B	55	10	45	10	29	6
Mean	51.5000	8.5000	41.0000	9.5000	27.0000	5.5000
StDev	4.9497	2.1213	5.6569	0.7071	2.8284	0.7071
SEM	3.5000	1.5000	4.0000	0.5000	2.0000	0.5000

OIC Study						
	Pre-screened	Non-qualified	Screened	Screen Failures	Randomized	Dropped
Site A	45	12	12	6	5	1
Site B	27	4	15	7	5	3
Mean	36.0000	8.0000	13.5000	6.5000	5.0000	2.0000
StDev	12.7279	5.6569	2.1213	0.7071	0.0000	1.4142
SEM	9.0000	4.0000	1.5000	0.5000	0.0000	1.0000

Mean Subject Accrual Fractions			
	Eligibility Fraction ( $\pm$ SEM)	Enrollment Fraction ( $\pm$ SEM)	Recruitment Fraction ( $\pm$ SEM)
CIC Study	0.3819 ( $\pm$ 0.0628)	0.3947 ( $\pm$ 0.0711)	0.1508 ( $\pm$ 0.0455)
IBS-C Study	0.7961 ( $\pm$ 0.1318)	0.6585 ( $\pm$ 0.1130)	0.5243 ( $\pm$ 0.0745)
OIC Study	0.3750 ( $\pm$ 0.1354)	0.3704 ( $\pm$ 0.0416)	0.1380 ( $\pm$ 0.0347)

### Aim 3 Data: Advertising Cost-Effectiveness

CIC Study								
Newspaper	Cost	Responses	Prescreened	Prescreen Rate	Cost per prescreen	Fractional Cost	Fraction Eligible	Cost Efficacy Index
Dallas Observer	1110	16	4	0.25	277.50	0.2969	0.0656	0.0145
GreenSheet	315	5	1	0.2	315.00	0.0842	0.0164	0.0032
<b>Totals</b>	<b>1425</b>	<b>21</b>	<b>5</b>			<b>0.3811</b>	<b>0.0820</b>	<b>0.0176</b>
Mean	712.5000	10.5000	2.5000	0.2250	296.2500	0.1906	0.0410	0.0088
SEM	281.0749	3.8891	1.0607	0.1892	233.3452	0.0752	0.0174	0.0040
Internet	Cost	Responses	Prescreened	Prescreen Rate	Cost per prescreen	Fractional Cost	Fraction Eligible	Cost Efficacy Index
DallasBlack.com	975	87	15	0.1724	65.00	0.2608	0.2459	0.2319
Facebook	200	3	None			0.0535	0.0000	0.0000
Newstudy								
Emailblasts	900	46	24	0.5217	37.50	0.2407	0.3934	0.6431
Craigslist	75	54	14	0.2593	5.36	0.0201	0.2295	2.6260
Google Ad words	0	6	2	0.3333	0.00	0.0000	0.0328	
Clinical Connection	158	8	None			0.0423	0.0000	0.0000
Backpage.com	6	1	1	1.0000	6.00	0.0016	0.0164	0.1675
<b>Totals</b>	<b>2314</b>	<b>205</b>	<b>56</b>			<b>0.6189</b>	<b>0.9180</b>	<b>1.3618</b>
Mean	330.5714	29.2857	11.2000	0.4573	22.7714	0.0884	0.1311	0.6114
SEM	60.2237	4.7764	1.9360	0.1285	10.4790	0.0161	0.0225	0.1691
Flyers	Cost	Responses	Prescreened		Cost per prescreen			
Printed Flyers	114	1	0					
Totals	114	1	0		N/A			
<b>OVERALL</b>	<b>3739</b>	<b>226</b>	<b>61</b>	<b>0.3910</b>	<b>100.9082</b>			

\*Data from printed flyers not included in analysis, but provided here for completeness

## IBS-C Study

<u>Newspaper</u>	<u>Cost</u>	<u>Responses</u>	<u>Prescreened</u>	<u>Prescreen Rate</u>	<u>Cost per prescreen</u>	<u>Fractional Cost</u>	<u>Fraction Eligible</u>	<u>Efficacy Index</u>
Dallas Observer	740	17	7	0.4118	105.71	0.4700	0.1077	0.0247
Greensheet	322.5	7	3	0.4286	107.50	0.2048	0.0462	0.0104
<b>Totals</b>	<b>1062.5</b>	<b>24</b>	<b>10</b>			<b>0.6748</b>	<b>0.1538</b>	<b>0.0351</b>
Mean	531.2500	12.0000	5.0000	0.4202	106.6071	0.3374	0.0769	0.0175
SEM	147.6085	3.5355	1.4142	0.2406	59.5737	0.0937	0.0218	0.0050
<u>Internet</u>	<u>Cost</u>	<u>Responses</u>	<u>Prescreened</u>	<u>Prescreen Rate</u>	<u>Cost per prescreen</u>	<u>Fractional Cost</u>	<u>Fraction Eligible</u>	<u>Efficacy Index</u>
Craigslist	75	49	28	0.5714	2.68	0.0476	0.4308	3.8956
ClinicalConnection .com	237	13	3	0.2308	79.00	0.1505	0.0462	0.0142
Backpage.com	0	1	None					
Email blast: newstudy.info	200	47	24	0.5106	8.33	0.1270	0.3692	1.0733
<b>Totals</b>	<b>512</b>	<b>110</b>	<b>55</b>			<b>0.3252</b>	<b>0.8462</b>	<b>2.2018</b>
Mean	128.0000	27.5000	18.3333	0.4376	30.0040	0.1084	0.2821	1.6610
SEM	27.4841	6.0467	4.4763	0.3094	3.2038	0.0180	0.0689	0.6688
<u>Flyers</u>	<u>Cost</u>	<u>Responses</u>	<u>Prescreened</u>	<u>Prescreen Rate</u>	<u>Cost per prescreen</u>			
Printed Flyers	64.94	3	3	1	21.65			
<b>OVERALL</b>	<b>1574.5</b>	<b>134</b>	<b>65</b>	<b>0.4306</b>	<b>60.6452</b>			

\*Data from printed flyers not included in analysis, but provided here for completeness

## OIC Study

<u>Newspaper</u>	<u>Cost</u>	<u>Responses</u>	<u>Prescreened</u>	<u>Prescreen Rate</u>	<u>Cost per prescreen</u>	<u>Fractional Cost</u>	<u>Fraction Eligible</u>	<u>Efficacy Index</u>
Dallas Observer	185	2	None			0.0558	0.0000	0.0000
Employment Guide	350	3	1	0.3333	350	0.1055	0.0588	0.0328
<b>Totals</b>	<b>535</b>	<b>5</b>	<b>1</b>			<b>0.1613</b>	<b>0.0588</b>	<b>0.0214</b>
<b>Mean</b>	<b>267.5000</b>	<b>2.5000</b>	<b>0.5000</b>	<b>0.3333</b>	<b>350.0000</b>	<b>0.0807</b>	<b>0.0294</b>	<b>0.0164</b>
<b>SEM</b>	<b>58.3363</b>	<b>0.3536</b>	<b>0.3536</b>	<b>0.1697</b>	<b>494.9747</b>	<b>0.0176</b>	<b>0.0208</b>	<b>0.0116</b>
<u>Internet</u>	<u>Cost</u>	<u>Responses</u>	<u>Prescreened</u>	<u>Prescreen Rate</u>	<u>Cost per prescreen</u>	<u>Fractional Cost</u>	<u>Fraction Eligible</u>	<u>Efficacy Index</u>
ClinicalConnection.com	79	2	2	1.0000	39.50	0.0238	0.1176	0.5810
CenterWatch.com	0	2	None					
Craigslist	75	11	5	0.4545	15.00	0.0226	0.2941	3.8250
DallasBlack.com	975	30	2	0.0667	487.50	0.2940	0.1176	0.0471
Facebook	285.62	4	None			0.0861	0.0000	0.0000
Email blast: newstudy.info	966.67	13	6	0.4615	161.11	0.2915	0.3529	0.4273
MyDFWMommy.com	400	2	1	0.5000	400.00	0.1206	0.0588	0.0287
<b>Totals</b>	<b>2781.29</b>	<b>64</b>	<b>16</b>			<b>0.8387</b>	<b>0.9412</b>	<b>1.0562</b>
<b>Mean</b>	<b>397.3271</b>	<b>9.1429</b>	<b>3.2000</b>	<b>0.4966</b>	<b>220.6223</b>	<b>0.1398</b>	<b>0.1569</b>	<b>0.8182</b>
<b>SEM</b>	<b>59.2883</b>	<b>1.4672</b>	<b>0.4336</b>	<b>0.1036</b>	<b>35.3515</b>	<b>0.0207</b>	<b>0.0229</b>	<b>0.2487</b>
<b>OVERALL</b>	<b>3316.29</b>	<b>69</b>	<b>17</b>	<b>0.2464</b>	<b>195.08</b>			



## Appendix B: Propagation of Error

Error was propagated when calculating the subject accrual fractions. An example of the methods used to propagate this error in such a division equation is shown below.

Eligibility Fraction example (CIC Study):

w = Average screened per site =  $19 \pm 0.4082$

x = Average prescreened per site =  $49.75 \pm 7.1107$

$$z = \frac{w}{x} = \frac{19}{49.75} = 0.3819$$

$$\Delta z = z \left( \frac{\Delta w}{w} + \frac{\Delta x}{x} \right) = 0.3819 \left( \frac{0.4082}{19} + \frac{7.1107}{49.75} \right) = 0.0628$$

Therefore the Eligibility Fraction (z) for the CIC study =  $0.3819 \pm 0.0628$

## **Appendix C: Daily Internship Journal**

Week 1:

June 4, 2014

Today was my first day on site. I spent the morning reviewing the protocol of the constipation study, which they are currently enrolling. In the afternoon, I began getting oriented using Clinical Conductor which is the software used for databasing patient information, handling incoming calls, making call lists, performing prescreening, and scheduling patient appointments.

June 5, 2014

This morning I began reviewing the prescreening questions for the constipation study. These questions are used for recruitment purposes during initial patient contact. For this particular study, questions include inquiries into the duration and severity of their constipation. Additionally, the questions are designed to do a somewhat “quick and dirty” assessment of where the patient stands in regards to the inclusion/exclusion criteria as per study protocol. For example, for a patient to participate in the constipation study they cannot have been diagnosed with Irritable Bowel Syndrome in the past. Thus, one of the prescreening questions asks if they have ever had such a diagnosis.

After becoming accustomed with the questions, I was briefed on how to conduct phone recruitment interviews. ACRC has a database of former participants and people that have expressed interest in taking part in a clinical trial. A call list is created of potential subjects based on their history of constipation, or if they have taken part in a similar study. Then begins the long process of making your way through this call list.

June 6, 2014

Today I began making calls off of the first call list that contained patients (obtained through advertising and former studies) that had expressed interest in participating in a constipation study. This involves calling patients to give them a little more information about the study, as well as procuring more information in regards to the severity and duration of their constipation symptoms. If the patient agrees, we will take them through a number of screening questions to see if they prequalify. If they fit the participant profile as outlined by the pre-screening questions, we will go ahead and set up a screening appointment. At the first screening appointment, the study coordinator will go over the study more in depth with the patient as part of the informed consent process.

In the afternoon, I was allowed to accompany one of our coordinators on a first visit screening appointment. It was for a blood thinner study that I hadn't familiarized myself with the protocols yet, but it was still an enlightening experience. The coordinator took vital signs and went through the patient's medical history in depth. The patient and the coordinator each had a copy of the informed consent and went through it together, and the coordinator would answer any questions the patient may have. After the coordinator completes all the tasks outlined in the

protocol to for a patient visit 1, they set up an appointment for a visit 2 follow-up. Usually it is visit 2 that the patient is actually randomized and distributed drug.

Week 2:

June 9, 2014

Today I continued making calls off of the call list we had created. I'm beginning to get into a rhythm with recruitment calls. I also accompanied a study coordinator, on a followup visit for a nocturia study. It's actually a nasal spray that could help frequent nighttime urination, which is interesting. The study coordinator also took vital signs, asked questions about the patient's symptoms, and took blood and urine samples. In the afternoon, I continued making calls and setting screening appointments for the constipation study.

June 10, 2014

Today I flagged clinic patients for physicians practicing out of Village Health Partners, a clinic located in our building. The recruitment specialist at ACRC Trials had completed Chart Review for the Synergy study. In the process of chart review, clinic patients that may be good participants are found based on information in their medical records. Patients that have had problems with constipation are placed on a list and we contact their primary care physician for permission to contact them about the study. After I had sent alerts to all the physicians, I continued to make calls off of the call list in regards to the constipation study.

In the afternoon, I was able to observe how to process some labs. Based on the study, there is a variety of different lab procedures that could be done. If a plasma sample is requested then a blood sample will be centrifuged for a given amount of time and the plasma is pipetted out into designated tubes. Depending on the study protocol, blood, serum, and urine samples are shipped to a central lab for processing.

June 11, 2014

This morning I continued making recruiting calls. I also was instructed in how to set up new participant charts. This involves making copies of "blank source" documents (usually provided by the sponsor), informed consent, and progress report templates into a generic chart to be taken to the first patient visit. If the patient qualifies, it is then populated with all the necessary information.

In the afternoon, I left for Chicago to attend a Study Coordinator meeting for a new study for an investigational new drug in the treatment of gout. That night I went to an dinner/orientation for attendants of the conference.

June 12, 2014

I spent the day attending the study coordinator meeting. During the meeting, they discussed the history of gout and its available treatments. They then discussed the mechanism of action of the investigational drug. Gout is caused by the aggregation and crystallization of uric acid in joints. It can cause an immune response resulting in a painful inflammatory response. This is termed a gout flare. The study drug is a xanthine oxidase inhibitor. Xanthine oxidase is an enzyme that is important in uric acid synthesis. The meeting then covered the study protocol in

depth, explaining everything from recruitment to the study closeout visit. It was an enlightening overview of how the study will be conducted.

June 13, 2014

I returned to making recruitment calls for the constipation study.

Week 3:

June 16, 2014

Today I made copies of informed consent and blank source documentation and for each of the clinics involved in the constipation study. Afterwards, I prepped our regulatory binder for an upcoming monitoring visit. The regulatory binder contains copies (and originals) of all relevant documentation to the study. In the afternoon, I accompanied a study coordinator as she performed a visit 1 pre-screening appointment for the study. This visit involved urinalysis, blood work, vitals, and complete physical. The patient was walked through the process of informed consent and the details of the study. Then the patient was briefed on how to operate the electronic diary.

Later, we had a staff meeting to get everyone up to speed on all the upcoming studies. We briefly reviewed protocols for the constipation study, gout study, and a blood thinner study.

June 17, 2014

Today I was tasked with filing paperwork into the various regulatory binders of our current studies. The regulatory binders for each study contain all pertinent paperwork regarding each study. When a monitor comes for a visit, most of their time is spent ensuring that the regulatory binder is accurate and complete.

June 18, 2014

Today I began the process of chart review for the gout study. This involves logging onto the server for the patient chart system of Village Health Partners. Then I was able to generate a report based on certain aspects of the patient population. For example, this study is obviously intended for patients currently dealing with gout, therefore I made a filter for patients with a gout diagnosis. Other factors, like age, BMI, etc. can also be filtered for. After a report has been generated, I begin going through each patient's chart looking for potential exclusionary criteria.

Later, I assisted in a Visit 1 screening appointment for the constipation study. During this visit we go over the informed consent form in detail. It is important to make sure the patient knows that by signing the informed consent they are in no way obligated to continue in the study if at any time they choose not to participate.

Today I also approached a patient in the clinic about potential participation in the study. First, we get the doctors permission to speak to the patient after their regularly scheduled visit. The approach is a little different than patients that are calling from outside advertising. Usually these patients are not enticed by the monetary compensation, but rather the potential alleviation of their symptoms, or the opportunity to help others with their condition. We bring along a copy of the informed consent form for the patient to take home and review at their leisure.

June 19, 2014

Today I resumed chart review for the gout study. I also accompanied a study coordinator as she performed a screening visit for a potential participant in the constipation study. For this visit I took vital signs and observed as the study coordinator explained the informed consent form. One thing I realized today is the importance of explaining what a placebo is and its purpose in the drug trial. Explaining the concept of having a placebo control is important to clarify to the patient that they may or may not experience any relief from their constipation symptoms while participating in the study. For this particular study if the patient is over 50 years old, they must have had a colonoscopy within the past 10 years. If they have not then the sponsor will pay for them to receive one. This patient had never had a colonoscopy so we were forced to postpone the remainder of his visit until we could schedule him for one.

We had a very busy afternoon of phone calls, so I spent the remainder of the day helping the patient liaison field phone calls. Many patients were calling about studies that we are enrolling because they had seen advertisements for it. I get the impression that many who seek us out upon seeing an ad, often are looking for a way to make some money for participating. It is an interesting contrast to the clinic patients who often do not need the extra money, but often will participate if they feel the study drug may provide some relief.

June 20, 2014

This morning I answered calls for patients that had seen outside advertisements promoting our studies. Several had been recipients of one of our “email blasts” in which an email is sent out to all those in our database informing potential participants of the studies that we are currently enrolling. Others had simply seen an ad in craigslist and wished to get a little more information about the work we do and the studies that we have going on. After that, one of the study coordinators showed me how we go about ordering more study materials. Each week we take inventory of the materials we have available at each site, and look at upcoming appointments scheduled next week to make sure that we have enough on hand. Today we ordered more drug testing dipsticks and “visit 1 kits” for the constipation study (these include blood draw vacutubes, urine sampling equipment, pipets, etc). The request goes to the central lab designated by the sponsor of that particular study.

In the afternoon, I helped process some labs from the day’s visits. I also learned how to prepare a blood smear. A small amount of blood is dropped onto a slide, then with another slide you smear it across the glass. You then allow it to dry before packaging.

Week 4:

June 23, 2014

This morning I continued chart review for the upcoming gout study. After, I shadowed one of the coordinators during a few study visits. I learned a little more about the blank source documentation for each visit. It provides an outline for the study coordinator of all the visit requirements. Later, the information gathered is entered into the “EDC” (electronic data

collection). I again witnessed informed consent. They would like me to become comfortable enough to begin administering informed consent myself.

After the visits, I processed the labs from the visits. This involves centrifugation of some of the blood samples to extract serum, and preparing a couple blood smear slides. Everything must be packaged and labeled as outlined in the protocol, then packaged for shipping. Later, the study coordinator demonstrated how to enter patient visit information into the EDC, and I did some data entry for various patient visits to become accustomed with how the system operates.

June 24, 2014

This morning I resumed the process of chart review for the gout study. Afterwards, I processed some labs from the day's appointments so far. I also shadowed one of the coordinators for a study visit for the dustmite allergy study that is currently underway. The source and protocol was different than the other studies I have oriented to thus far. After the visit, Raquel demonstrated data entry into the EDC for this study. The patient had experienced some side effects while taking the medication, so for each an adverse event form had to be generated. Thankfully, none were a serious adverse effect.

Around lunchtime, I had the opportunity to attend a webinar regarding online techniques for patient recruitment. I learned about targeted advertising, which delivers online advertisements to users within a 50 mile radius that have put certain keywords in their search query. For example, a user in Carrollton may Google the phrase "asthma research", target advertising allows us to selectively distribute ad content only to users with similar search keywords in our area. Ideally, this approach would lead to much more selective advertisement exposure to potential study participants. They also discussed the advantage of contacting Patient Advocacy Groups for opt-in email lists. The example they provided was contacting an autism advocacy group for an email list of potential participants for an Autism related study.

June 25, 2014

This morning I performed various site close out procedures (for a study that is about to close) as outlined in our SOPs here at ACRC Trials. First, I gathered all the patient charts for participants at this site. I then gathered all the Informed Consent Forms from the various charts into one binder, this makes the monitor's job easier later in the closeout process. Various close out related documents had to be found from the regulatory binder and scanned into our system for archival.

In the afternoon, I double checked and updated out Investigational Product accountability logs for an ongoing allergy study. The IP accountability log tracks the dates, amounts, and boxes of study drug over the course of the study. All study drugs are randomized and blinded so the boxes of "real drug" are identical to the placebos. Patients are supposed to return all study drug they haven't used when they come in for their follow up visits. We then chart how many pills have been taken, and how many are being dispensed. This meticulous tracking of the IP is vital to the viability of the study, because it gives some insight into how compliant the patient has been with the study.

I finished up the day by continuing the process of chart review for the gout study.

June 26, 2014

Today I had a site initiation visit with my advisory committee. We discussed possible directions for my thesis. This meeting highlighted the importance of centering my thesis on some form of gathered quantitative data.

Later, the patient recruiter demonstrated how we go about sending out email blasts. We used a site called constantcontact.com. This site also provides some statistics to follow up on the email success. For example, you can see the percentage of people that even opened the email, and where they clicked once viewing the email.

June 27, 2014

This morning I performed some close out/archiving procedures for a study that is ending. This included gathering ICFs and closeout related documents so they can be easily accessed for a monitor "closeout visit". Later, performed some IP accountability for incoming asthma medication that is being used in another current study. In the afternoon, I processed some labs for shipment.

Week 5:

June 30, 2014

Today I followed one of the coordinators as she conducted patient visits. One such visit was to inform a patient that their blood work had come back positive for an issue that would disqualify them from the current study. Of course, the patient was first instructed to seek medical treatment for the newfound condition. We then collected all study related materials and dispensed their monetary compensation for taking part in the study. When I wasn't in the clinic I continued chart review for the upcoming gout study.

July 1, 2014

This morning I continued making recruiting calls and scheduling patients for the constipation study. After that, I began filling out Site Status Report forms for a influenza study that has been put on hold (until flu season). These forms keep the IRB up to date with the status of a study as it progresses. It gives them a variety of information like, how many patients have enrolled, which version of the ICF has been signed, and if the PI is up to date with his GCP training.

July 2, 2014

Today I assisted the study coordinators as they completed a number of patient visits. One such visit included a Pulmonary Function Test, so I was able to learn how to calibrate the spirometer to obtain values like FVC or FEV1. Later in the day I also observed a study coordinator as she performed a skin test for a current allergy study. In the afternoon, I flagged potential patients within the online chart system to ask the physician if they thought they would be suitable participants for the constipation study.

July 3, 2014

This morning we screened more patients for the constipation study. I also was able to perform a follow up visit for our allergy study once I had been added to the delegation log. This visit just required me to collect any IP that the participant returned as well as dispense new drug. After all the visits this morning, I helped one of the coordinators process all the labs that we had collected.

Week 6:

July 7, 2014

This morning was relatively slow as far as patient appointments, thus I was able to do some independent research for my thesis. Later, I assisted with a few patient visits and learned how to send frozen lab shipments using dry ice. In the afternoon, I continued chart review for the upcoming gout study.

July 8, 2014

This morning I updated the blank source documentation pertaining to one of our studies. The sponsor had made a slight addendum to how the medication would be collected, and thus new source documentation reflecting said change was necessary. Later, I continued with chart review for the upcoming gout study. In the afternoon I completed an inventory of our current studies and potential studies. This form included our goals for randomization as well as how many patients we had successfully randomized at each site to date. I also worked on scheduling some constipation study patients to come in for their randomization visits.

July 9, 2014

This morning I saw patients with one of the coordinators for the dustmite allergy study. It was interesting to hear the patients talk about the side effects of taking the study medication, as well as listening to them conjecture as to whether or not they were receiving “the real stuff”. In the afternoon, I prepared labs for shipment. Afterwards, I began reviewing the informed consent form for the constipation study because I will soon start approaching clinic patients to inquire about participation.

July 10, 2014

This morning I had the opportunity see a few more patients for the dustmite allergy study. These visits involved collecting unused study medications (and empty packaging), performing a urine pregnancy test (if applicable), and dispensing new study medication. Afterwards, it was helpful to learn all that the study coordinator needs to do when completing a patient visit. First, all the information from the visit was entered into the EDC for the study. Next, the IP accountability log is filled in to track return of study medication. If labs were drawn, these also need to be processed. In the afternoon, I reviewed some literature on recruitment for my thesis proposal.



July 11, 2014

Today I assisted the study coordinators with visits for the dustmite study. Some of these visits required spirometry be performed (for asthmatics). This allowed me the opportunity to become more accustomed with calibrating the spirometer and performing a pulmonary function test. Later in the day, I processed labs and did some independent study for my research proposal

Week 7:

July 14, 2014

This morning I assisted one of the coordinators in seeing patients for the nocturia study. These visits required vitals, urinalysis, EKG, and physical exam. In the afternoon, I gathered close out documents for three trials that had been cancelled by the sponsor. This paperwork included, the monitor visit log, final patient enrollment log, site status report to IRB, IRB closeout acknowledgement, and memo from sponsor to cease enrollment. All of these forms were found in the regulatory binder and scanned into our digital records system. Later, I helped process labs from the days visits.

July 15, 2014

In the morning before patients had arrived, I worked on putting the finishing touches on my research proposal. Later, I assisted one of the study coordinators with a patient visit for the dustmite allergy study. Since she was continuing the study after moving to this area, a new informed consent document had to be signed before she continued in the trial. After informed consent was readministered, I took her vitals and had her fill out an electronic questionnaire. This visit also required spirometry so I calibrated the machine and performed a pulmonary function test. In the afternoon, I continued with chart review for the upcoming gout study.

July 16, 2014

This morning one of the study coordinators tasked me with the job of reordering lab kits for the frequent nighttime urination study. I located the supply reorder form in the laboratory binder. After making a copy, I filled in the necessary information and faxed it. Later, I returned to making recruitment calls for the constipation study. This call list is of clinic patients that have been chart reviewed. I definitely notice that some of these patients seem a little more annoyed and inconvenienced that we are calling them. In the afternoon, I completed a follow-up phone call visit for a patient that we saw yesterday in the clinic. The purpose of this call is to assess any new side effects of questions that the patient may have.

July 17, 2014

This morning I continued performing chart review for the gout study. Next, I did some data entry into EDC on behalf of one of our study coordinators. Later in the day, I performed another followup phone visit for a patient in the dustmite allergy study. My supervisor spoke

with me today about expanding my internship responsibilities to include some regulatory aspects of clinical research with the Regulatory Specialist here at ACRC. In the afternoon, I did some recruitment for the constipation study as well as process some labs from the days visits.

Week 8:

July 21, 2014

This morning I continued doing chart review for the constipation study. This involves using the protocols exclusionary criteria to make a list of possible participants. After this is complete we flag the patients primary care physician to request permission to contact the patient about the study. In the afternoon, I processed some labs from the study coordinator's visits today. After, I performed various closeout procedures for studies that are ending or being put on hold. This involves finding relevant documentation in the regulatory binder and scanning in, gathering all patients informed consent forms, and boxing up all study materials.

July 22, 2014

This morning I resumed both chart review and close out procedures. In the afternoon, patients began calling inquiring about the gout study because they had seen an advertisement on the television. This advertising campaign is done by the sponsor but has already yielded several calls. Afterwards, I attended another webinar on patient recruitment. It made several interesting points about the process of patient recruitment. In particular, they discussed how any recruitment plan is essentially an interaction of three factors: study protocol, target audience, and site budget.

July 23, 2014

Today was my first day assisting with regulatory tasks. Today I familiarized myself with several forms that are submitted by the site to the IRB. These site questionnaires include information on the PI, the type of subjects that will be enrolled, and the version of the ICF that will be used. In the afternoon, I worked on scanning newly approved ICFs and approval forms onto our server.

July 24, 2014

Today, I was added to the delegation log of the constipation study and assisted one of the coordinators in seeing a patient for a Visit 1 screening appointment. I observed the informed consent process, then afterwards the coordinator went through the patient's concomitant medications and medical history. I also took vitals and performed an EKG. In the afternoon, I processed the labs that had been collected from the day's visits. Later, I worked on filling out the subject identification log, subject screening and enrollment log, and IP reconciliation logs for the constipation study.

Week 9:

July 28, 2014

This weekend I attended the Investigator meeting for the constipation study in Miami. During the meeting we discussed and trained on the protocol, EDCs, IWRS, and electronic journals. I also learned more about the mechanism of action of the study medication.

When I returned to ACRC Monday morning I resumed my closeout task. We are in the process of closing out 6 studies to make way for the new studies we are starting. In the afternoon, I focused on chart review and recruitment for the constipation study.

July 29, 2014

Today was my first day to go to one of the other sites managed by ACRC Trials. While at this location we saw patients, and I was able to deliver informed consent for the first time for the constipation study. During the downtime, I performed some chart review for the upcoming gout study. This location does not have an electronic medical records system in place yet, so chart review involves physically retrieving patient charts from the record room and review each file for inclusion/exclusion criteria. I finished the day by processing today's labs for shipment.

July 30, 2014

This morning I worked with the regulatory specialist doing regulatory related duties. The majority of today's work involved scanning in forms. We are required to have signed financial disclosure forms for everyone listed on the 1572, so I ensured that we had those forms signed and saved onto our internal server. In the afternoon, I completed the closeout procedures for several studies that we are archiving.

July 31, 2014

Today I went to our Carrollton office again to assist a study coordinator in seeing several patients for Visit 1 of the constipation study. While there, I performed informed consent, performed EKGs, and processed labs. I continued to gain experience in using the source documentation to guide patient visits. The information collected on the source eventually needs to be added to the EDC so accuracy is vital. When I returned to our central location I began IATA training on the transportation of hazardous materials.

August 1, 2013

This morning I resumed and completed the IATA training. It was interesting to learn about the different classifications of shipped biologics in the clinical research industry. In the afternoon, I performed some basic study start up tasks for a few upcoming studies including preparing the filing bins for studies. The file cabinet holds patient files, blank source documentation, ICFs, patient payment forms, and all other study related material.

Week 10:

August 4, 2014

This morning I performed various study start up related tasks for upcoming cold sore, ringworm, and asthma studies. I updated the patient payment forms, which involved reviewing the protocol and ICFs to determine how many visits are required and how much compensation each visit receives. In the afternoon, I ran a report and began chart review for our upcoming cold sore study. This is an interesting indication because patients do not necessarily receive a 'herpes labialis' diagnosis, often it is referred to as fever blisters or cold sores.

August 5, 2014

This morning I resumed chart review for the cold sore study. Later, I helped on the phones because we began to receive quite a few calls concerning the gout study since they are running the television commercial. I also called a few patients that needed to come in to redo a few of their labs. These patients will require an "unscheduled visit" that required compensation. This served as an important lesson in the importance of swift and accurate lab shipments. In the afternoon, I completed the ICF tracker documents for a few of our upcoming studies.

August 6, 2014

This morning I worked with the regulatory specialist on regulatory tasks. This involved starting a new regulatory binder for an upcoming pediatric asthma study. Once created, this binder must contain current copies of the 1572 and Financial Disclosure Forms for everyone listed on it. In the afternoon, I continued doing some chart review for the upcoming cold sore study.

August 7, 2014

This morning I finished completing visit reminders for some of our upcoming studies. These are overviews of study visits to be utilized by the coordinators. It includes information on how long the visit should take, whether or not the patient needs to be fasting, and what the patient needs to bring with them to the visit. Next, I worked with the regulatory specialist to update the 1572s for several studies because ACRC Trials recently hired two new study coordinators and they needed to be added. When someone is added to the 1572, we must also have a financial disclosure form on file so I created those for the new study coordinators to sign.

In the afternoon, I prepared some study material for shipment back to the sponsor. These items were for an asthma study that was recently closed-out, so the spirometer and associated computer needed to be returned. Later, I completed some regulatory filing for a couple upcoming studies.

August 8, 2014

Today our site had a monitoring visit for the frequent nighttime urination study. There were various regulatory tasks that needed to be completed for this. I filed various correspondence

and IRB reports into the regulatory binder. We had outdated copies of some of the investigators licenses, so I obtained more updated versions and filed them.

Later, I completed a 1572 and Financial Disclosure Forms for a new site for our upcoming ringworm study. Next, I completed an IP accountability log for shipments of study medication for one of our asthma studies. I finished out the day completing a subject enrollment log that tracked which version of informed consent that was signed for the same asthma study.

Week 11:

August 11, 2014

Today I resumed chart review for the upcoming gout study. When taking breaks from that, I reviewed protocols of studies that we are currently enrolling. Next week ACRC's main recruiter will be taking a vacation, so I need to ensure that I am comfortable screening and scheduling for all current studies. Specifically today I reviewed the protocol for the asthma study we are currently conducting.

August 12, 2014

This morning I worked on updating all 1572s of current studies to reflect a number of personnel changes that have occurred recently. In the afternoon, I went with a study coordinator to another site to see patients for the constipation study. While there I assisted with patient visits, processed labs for shipment, and reorganized the patient charts. On the way back to the main office, we picked up dry ice for sending a frozen shipment of labs. Next, I packaged all pending frozen samples for shipment.

August 13, 2014

This morning I completed filing some paperwork into the regulatory binder of our upcoming flu study. Next, I worked with the regulatory specialist doing some regulatory tasks, mainly scanning in signed 1572s and financial disclosure forms. Later, I finished closeout tasks on a diabetes study for which we recently had a site closeout visit. In the afternoon, I assisted a study coordinator as she saw patients for the constipation studies. I took vitals, performed diary training, and helped with informed consent process. One of the patients had been having a some significant side effects while taking the study medication, so I took this opportunity to learn the proper documentation and coordinator action in the handling of adverse events. After the visits, I processed labs for shipment.

August 14, 2014

This morning I completed the IP and rescue medication accountability logs for the dustmite study. Next, I cleaned the lab and organized odds and ends of unused lab kits.

August 15, 2014

Today I went with a coordinator to one of our study sites in Allen. Today we did not see any patients, but spent time organizing and straightening the office. There are a number of studies about to begin enrollment at that location so it was imperative that the study material was properly arranged so it could be utilized at patient visits.

Week 12:

August 18, 2014

This week our front desk patient liaison is out on vacation so I will be covering her responsibilities. This mainly includes the bulk of recruitment activities, scheduling, and answering phones. Also, at the end of the day, I called everyone that had an appointment tomorrow to remind them of the time and ask if any changes needed to be made.

August 19, 2014

Today I continued to fill in for the patient liaison. This morning I faxed medical records requests to the physicians offices of some new patients. The research director also requested that I make a set of hanging template folders for two of our new sites. In these files, coordinators have quick access to blank templates they may need to utilize, such as new patient paperwork, blank physical exam templates, blank temperature log templates, etc.

I also screened a number of patients for our constipation study. Most had received an email or saw one of our craigslist ads.

August 20, 2014

Today I continued to fill in for the patient liaison, which involved answering phones, screening and scheduling patients. I also helped Raj with some regulatory documentation. Specifically, this morning I scanned signed 1572s of a few sites of upcoming studies onto our servers for submission. In the afternoon,

August 21, 2014

Today I helped the coordinators conduct patient visits. I also had the opportunity to see a patient by myself for the allergy study. This particular visit did not require any blood draws, but I took vitals, performed a pulmonary function test, collected and dispensed IP, and recorded adverse events. After seeing the patient, I processed labs for shipment and entered the data into the EDC.

In the afternoon, I continued to screen and schedule patients while the patient liaison is out of town. I was also tasked with making visit reminder phone calls for the patients scheduled tomorrow.

August 22, 2014

This morning, I completed a new study questionnaire for a potential flu study we may conduct this flu season. Later, I saw two patients for the dustmite allergy study. Both were asthmatics and required a Pulmonary Function Test be performed. Afterwards, I processed labs and entered the visit data into the EDC.

In the afternoon, I helped one of the coordinators enter in patient data into EDC that had accumulated over the week and needed to be entered before the weekend.

Week 12:

August 25, 2014

This morning I saw a patient for the dustmite allergy study. I'm beginning to feel more comfortable doing the day to day responsibilities of a research coordinator. After seeing a patient it's important to begin processing labs (centrifuging and making copies for record keeping), and begin data entry into EDC. Additionally, if the patient is there for a treatment phase visit of the study they will be returning IP and the coordinator will dispense new IP. When this transaction takes place it is important that detailed records are kept regarding the patient number, box number, number of pills, and dates dispensed/returned. All this information is tracked in the IP accountability log that eventually is filed in the reg binder at the conclusion of the study.

August 26, 2014

Sick day

August 27, 2014

Today I saw two patients for the dustmite allergy study. During these visits, I reviewed any new side effects, concomitant medications, performed a pulmonary function test (spirometry), collected/distributed Investigational Product (IP), and had a physician perform an oropharyngeal exam. After the visits, I processed labs, entered the visit data into EDC, and completed the IP accountability log.

In the afternoon, the research director requested that I complete a "study opportunity" questionnaire. These forms are sent to prospective sites in advance of studies actually being offered to individual sites. I think the purpose is so the Sponsor (or CRO) can begin to get an idea of the interest of potential sites, and the site's level of preparedness in undertaking another study.

August 28, 2014

This morning I entered data into EDC that had accumulated from the other coordinators' patient visits this week. Next, I created updated 1572s for a few study sites to reflect recent personnel changes. Later, I was tasked in the rearrangement of the lab. I removed one refrigerator (to be used at another site), and moved the existing sample freezer to a new spot in the lab.

In the afternoon, I was tasked with shipping back two unused patient diaries from the opioid induced constipation study. I called the tech support, who issued a airbill (via email) and I packaged them for shipment. Later, I set up the voicemail on my work phone. I spent the remainder of my day screening patients for one of the current asthma studies.

August 29, 2014

Today I saw another patient or the dustmite allergy study. It was the same visit as the previous patients so I completed the same basic procedures. Later I assisted a coordinator with a randomization visit for the opioid induced constipation study. However, this patient (who had been in a 'screening' period) stated that she was exhibiting some alarming symptoms and the PI decided that it was in the best interest of the patient not to continue in the study. After the last patient visit had been conducted I processed labs for shipment

Week 13:

September 2, 2014

This morning I was tasked with returning some faulty patient diaries for the opioid induced constipation study. This involved contacting the vendor and requesting a shipping bill be emailed to me. After receiving the airbill I packaged them for shipment. Later, I faxed a few medical records release forms to the primary care physicians of some of our newer patients.

In the afternoon, I conducted another patient visit for the dust mite allergy study. Also, I was tasked with scheduling 3 patients from the constipation study that were now eligible for randomization.

September 3, 2014

This morning I performed EDC entry and query resolution on behalf of another coordinator. This involves going through the pertinent patient charts to ensure that all data is complete and accurate. Later, we received a new shipment of study medication. When this occurs the packing slip must be checked to ensure that all the designated IP kits were received.

In the afternoon, I attended a webinar training for an upcoming studies EDC system. Later, I organized the patient retention kits for the dustmite allergy study. These are sets of small gifts to be dispensed to patient throughout the study, with the goal of persuading them to be compliant participants, and to continue in the study.

September 4, 2014

This morning I corresponded with the CRO in the submission of some regulatory documents concerning an upcoming cold sore study. This included a signed 1572, investigator agreement, IRB questionnaire, and financial disclosure forms. These documents were scanned and emailed to my point of contact at the CRO. After they had been reviewed, they issued the shipping information for the actual submission of the documents.

In the afternoon, I helped one of the coordinators with labs and EDC entry.



September 5, 2014

This morning worked on obtaining signatures of a few of the physicians upstairs. After getting the constipation study's Site Initiation Visit Report signed, I was tasked with making a copy for the regulatory binder and sending the 'wet ink' copy in the mail. Later, I saw a patient for the dustmite study. Afterwards, I processed labs, entered data into EDC, and completed the IP reconciliation log.

Week 14:

September 8, 2014

Today I continued the process of chart review for several of our current studies.

September 9, 2014

Today I went with another coordinator to our Carrollton location to screen patients for the gout study. For this study, if the patient is currently taking some form of uric acid lowering therapy (like allopurinol) they must go through a "washout" period of 3 weeks before starting the study medication. However, before enrolling in the study it is always necessary to obtain informed consent. This process involves going through the details of the study with the patient and carefully addressing any concerns they may have during the process.

September 10, 2014

Today I helped Raj with some regulatory tasks in the main office. We are changing the PI on a few of our studies, which results in having to revise all regulatory documents to reflect this change. I also helped by obtaining signatures of some of the physicians that work in the clinic upstairs. Later, I was tasked with obtaining all the safety reports off of the portal. These all need to be signed by the PI and filed into the investigator site file.

September 11, 2014

This morning I completed chart review for the gout study at this site. In the afternoon, I assisted the patient liaison with recruitment efforts.

September 12, 2014

This morning I submitted several regulatory documents for an upcoming flu study to the CRO for review. This involved completing the IRB site questionnaire for one of our sites. This document includes information on the facility where the research is to be conducted, the PI, and qualifications of all research personnel.

Week 15:

September 15, 2014

This morning I assisted Raquel with seeing patients here at Village Health Partners. I observed a patient end-of-study visit for the nocturia study. I also assisted with EDC entry and labs following the visit. Later, I went to meet with the PI for the Dustmite allergy study to have him review and sign recently received lab values.

September 16, 2014

This morning I assisted a study coordinator with a randomization visit for the constipation study. A randomization visit marks the beginning of the treatment visit, and is the visit in which the patient receives the first dose of study medication. This particular study required an EKG to be performed 1 hour post-dose. After the visit, I processed labs and did EDC entry. Later, I obtained regulatory signatures from the physicians upstairs at Village Health Partners. In the afternoon, I drafted updated 1572s for a couple studies that have had some personnel changes. I was also tasked with getting the (recently received) regulatory binder for the gout study.

September 17, 2014

Today was a busy day. I assisted a study coordinator in seeing patients for a number of studies. We performed 6 patients visits before 1 pm. After those, there were many labs to process and data to be entered into EDC. In the afternoon, I was tasked with traveling to one another location to obtain regulatory signatures from a PI.

September 18, 2014

This morning we had a Site Initiation Visit for an asthma study ACRC is taking part in. While the monitor is in the office they will require various things throughout their visit. For example, if a chart of a randomized patient is incomplete, it must be rectified before moving forward. Also, the site must have on file every serious adverse event reports that has been submitted to the sponsor.

September 19, 2014

Today I focused on recruitment, chart review, and answering phones. I also assisted the coordinators by entering information into EDC and processing labs.

Week 16:

September 22, 2014

Today I arrived early to see a patient before they needed to go to work. However, unfortunately they were unable to make it, so I rescheduled the patient for the following day. Afterwards, I was sent to one of our other offices to assist one of the coordinators with their patient visits. While at that office I processed labs, entered data into EDC, and troubleshooted some

patient diaries that were malfunctioning. In the afternoon, I came back to the main office to assist with phones and patient visits.

September 23, 2014

This morning I was sent to our Carrollton office to assist the coordinator. She had me catch up on some EDC entry that needed to be done as well as process the labs of the visits she was conducting. Afterwards, I worked on making blank patient charts to prepare for future visits.

In the afternoon, we returned to the main office where I resumed recruitment activities and assisting on phones.

September 24, 2014

This morning I conducted a follow-up visit for the constipation study. This visit included tracking concomitant medications, adverse event assessments, blood work, vital signs, and physical exam. After the visit I processed labs and entered the patient data into the EDC. In the afternoon I was sent to assist the coordinator at the Allen office while she was conducting screening visits for the asthma study. This was my first experience consenting a child participant. This involves multiple consents for both the subject and legal guardian. While gathering this initial information attention to detail is key. A thorough screening is imperative to ensure only the qualified applicants are randomized into a study.

September 25, 2014

This morning I conducted a Visit 4 for a participant in the constipation study. This visit included patient questionnaires, concomitant medications, adverse events, IP collection/dispensation, vital signs, full physical, blood work, and urinalysis. After the visit, I processed the labs and entered the visit data into the EDC.

In the afternoon, I was sent to the Carrollton office to assist the coordinator with labs, organization, and data entry.

September 26, 2014

This morning I was tasked with organizing the Site Investigator Binder for the Gout study. This binder must have records and documentation of all aspects of the study as it is being conducted at our site. It contains IRB communications/approvals, Informed Consent Forms, Investigator Brochures, lab shipment records, IP accountability logs, 1572s, and copies of all approved advertisements for the study.

In the afternoon I conducted a randomization visit for the Gout study. This visit included patient questionnaires, vitals, IP dispensation, full physical, and ECG.

Week 17:

September 29, 2014

Today I was sent to our Carrollton office to assist one of the coordinators as she conducted patient visits. I took part in the informed consent process during a screening visit for the gout study.

September 30, 2014

This morning I worked on regulatory tasks with the regulatory specialist at ACRC Trials. I was tasked with organizing and submitting the relevant start up documents for an upcoming study. Later, I worked on updating the logs for the gout study. There are logs that track all subject screening/enrollment, IP tracking, and rescue medication accountability.

In the afternoon, I was sent the downtown Plano office to assist a coordinator with her patient visits while she was meeting with a monitor.

October 1, 2014

This morning I was tasked to obtain several regulatory signatures of the physicians conducting the clinical trials in conjunction with ACRC Trials. Afterward, each document must be scanned, filed and submitted to a regulatory agency (i.e. the IRB or CRO). In the afternoon, I assisted with two screening visits for the gout study. This trial requires a washout period of 3 weeks prior to randomization for anyone currently taking urate lowering medications (allopurinol, febuxostat, or probenecid). If the patient is not taking any ULTs then screening is to take place 4 days prior to randomization. This afternoon involved one of each screening visits. It was informative to see a side to side comparison of these two similar visits.

October 2, 2014

This morning I assisted with 2 more screening visits for the gout study, as well as an “end-of-treatment” visit for the constipation study. This visit involves blood work, EKG, patient questionnaires, and IP collection. The patient then enters a follow-up period where they continue to track their symptoms in the absence of study medications. In the afternoon, I assisted with lab specimen processing and EDC entry. I also completed a new study questionnaire that is submitted to sponsors who are trying to gather data on which sites may be selected to participate in future studies.

October 3, 2014

This morning I assisted with 3 patient visits for the asthma study ACRC Trials is currently conducting. These involve getting a thorough and comprehensive assessment of their asthma history and current therapies. This is necessary to ensure that the patient’s study dosage is stratified accordingly to the protocol. This study is comparing the efficacies of two asthma control formulations. In the afternoon, I assisted with lab processing and shipment, and EDC entry.

Week 17:

October 6, 2014

Today I assisted with 3 patient visits for the gout study. One was a randomization, another a screen failure, and the last was a redraw because his labs excluded him from participation. Afterwards, I entered patient data into the EDC and ensured that all charts from the past week are complete.

October 7, 2014

This morning I worked on entering patient data into EDC and updating logs. I was also tasked with bringing all our Investigator Site Files up to date. For example, anyone who see's patients, writes on source documents, or is involved with the study in anyway must be added to the delegation log that is located in the ISF. This morning I completed the delegation log for the gout study.

In the afternoon, I was sent to our Carrollton office to assist one of the coordinators get organized and assist with patient visits. I also picked up some dry ice in order to process lab shipments that needed to be sent out that day. Afterwards, I did EDC data entry for the remainder of the day.

October 8, 2014

This morning I was tasked with obtaining signatures from several doctors who work in the clinic upstairs. Afterwards, I worked on regulatory tasks. ACRC Trials have several studies that have Site Initiation Visits with a monitor in the coming weeks, so it is very important that we have all the necessary paperwork filled out and filled accordingly. (Complete this)

October 9, 2014

This morning I went to the downtown plano clinic to conduct two patient visits for the constipation study. The first visit was a screening visit and I performed much of the visit on my own. First, I had the patient fill out new patient paperwork and went over the informed consent document. I addressed any questions regarding the form or the study, and she agreed to participate in the trial. Next, I carefully went through the inclusion exclusion criteria for the study, recorded any concomitant medications, and reviewed her medical history. The remainder of the visit entailed taking vitals, recording height/weight, performing an EKG, full physical exam (by the PI) and training the patient on using the study dairy device. The next patient was a randomization visit for the constipation study. This visit included many of the same procedures as the screening visit, but with the addition of distributing study drug. After the visits I processed the labs for shipment and entered the visit data into the EDC.

In the afternoon, I went back to the main office and was tasked with updating the source documentation of the LABA study as some potential improvements were noted after conducting some patient visits and entering into EDC

October 10, 2014

This morning I conducted a follow up visit for the gout study at the main office. This visit involved taking the patients vitals, recording any adverse events or changes in medications, and

assessing patient compliance. Some labs were also required so I escorted the subject to the lab for a blood draw. After the visit, I entered data into EDC and processed the labs for shipment.

In the afternoon, I went to assist one of the coordinators at the Carrollton location. I assisted with EDC entry and organization. I also processed some frozen sample for shipment.

Week 18:

October 13, 2014

This morning I went to the Carrollton location again to assist a coordinator in conducting patient visits. We saw three patients for the gout study. These visits included patient questionnaires, EKG, IP collection/dispensation, urine sample collection, and blood work. After the visits, I entered data into the EDC and processed the labs for shipment.

In the afternoon, I traveled back to the main office to see a patient for the dustmite allergy study. This visit included a patient assessment, electronic questionnaires, taking vitals, IP collection/dispensation, and rescue medication collection/dispensation. After the visit, I entered data into the EDC.

October 14, 2014

This morning I was back at the main office. I conducted a followup visit for the constipation study. This visit including collecting/dispensing IP, recording adverse events, and checking patient compliance. After the visit, I entered data into the EDC and processed the labs. In the afternoon I worked on getting various regulatory documents printed, signed, and filed.

October 15, 2014

I took today to travel to campus to meet with my professors regarding my thesis.

October 16, 2014

This morning I assisted a coordinator in the main office conduct several patient visits. Two were screening visits for the gout study. These visits involved obtaining informed consent, reviewing medical history, physical exam, vital signs, and (in some cases) dispensing rescue medication. In this study, subjects take colchicine prophylactically while in the study in hopes of lessening the chances of having a flare. The other visit I assisted with was an end-of-treatment visit for the constipation study.

After the visits, I entered the visit data into the EDC and processed labs.

October 17, 2014

Today I went to the Carrollton location to assist one of the coordinators conduct visits for the gout study. We saw 5 different subjects. Two of the visits involved collecting Pharmacokinetic (PK) samples. These are timed blood draws to give insight into the drugs systemic distribution immediately following dosing. After the patient visits I entered the visit data into EDC and processed labs for shipment.

Week 19:

October 20, 2014

This morning I conducted a visit for the gout study at the main office. This was a fairly simple follow up visit that involved taking vitals, accessing patient compliance, and documenting the patients progress since beginning the study medication.

Next, I was sent to the Carrollton office to assist with patient visits. I conducted a screening visit for the gout study. This involved obtaining informed consent, medical history, concomitant medications. However, the patient did not meet the criteria for a gout diagnosis. Then I assisted a coordinator by entering patient data into the EDC and processing labs for shipment.

In the afternoon, I traveled to the Downtown Plano clinic to assist another coordinator. Again I processed labs for shipment and entered patient data into the EDC.

October 21, 2014

This morning, I conducted two patient visits for the gout study. Both of these visits were randomization visits. In order to be randomized the patient must meet inclusion and exclusion criteria. For the gout study this means having an elevated uric acid level and being off of any form of urate lowering therapy for at least 3 weeks. These visits also involve a physical exam performed by a physician, an EKG, IP dispensation and dosing, and a tophi assessment. Dispensing medication involves using the Interactive Web Response System (IWRS).

In the afternoon, I conducted a visit for the constipation study. This visit was a secondary screening visit following a study provided colonoscopy. This visit involved training the subject on using the symptom diary, dispensing rescue medication, taking vitals, and a drug screen for opiates. Following the visit, I processed labs and entered patient data into the EDC.

October 22, 2014

Today we had two monitors visit our site, one was a site initiation visit for an upcoming flu study and the other was a close out visit for an asthma study. One component of the site initiation visit is protocol training. This entails the monitor discusses the study protocol in depth with the study coordinators. Documentation of this training must be kept in the regulatory binder for future reference. After completing training, I conducted a patient visit for the dust mite allergy study. This visit involved IP collection/dispensation, compliance assessment, and oropharyngeal examination. A new version of the informed consent form was recently approved by the IRB, therefore the subject needed to be re-consented. Changes in the ICF were discussed with the subject and the subject elected to continue in the study.

Next, I completed a end of study visit for the constipation study. This was the first 'last patient visit' for the constipation study at this site. The visit involved blood work, urinalysis, patient questionnaires and subject diary collection.

Later, at another office I met with the Principle Investigator (PI) of the blood thinner study to review and sign safety reports.

October 23, 2014

This morning we had a staff meeting to bring everyone up to speed on ACRC's Standard Operation Procedures. Recently they have hired two new coordinators to assist with the workload. We discussed the importance of consistency and attention to detail across all sites. We also discussed some common missteps in some of our current studies.

After the meeting, I assisted with a screening visit for the constipation study. After this visit, I conducted a followup visit with another subject for the constipation study. This visit included IP collection/dispensation, subject questionnaires, physical exam with a physician, and adverse event assessment. After the visit, I processed labs and entered visit data into the EDC.

Next I conducted a randomization visit for the gout study. This involved reviewing the patients labs to ensure inclusion/exclusion criteria are met, full physical with a physician, and IVRS guided IP dispensation. All aspects of these procedures must be thoroughly documented and filed.

October 24, 2014

This morning I met with a few doctors upstairs in the clinic to review and sign off on labs and regulatory documentation. Next, I conducted a follow-up visit for the dustmite allergy study. This visit involved IP collection/dispensation, oropharyngeal exam with a physician, subject questionnaires, and adverse event assessment. After the visit, I entered visit data into the EDC and scheduled the subject's next follow-visit.

Later, I conducted an end of study visit for the constipation study. This visit involved IP collection, blood work, urinalysis, and full physical exam with a physician. After the visit, I processed labs and entered visit data into the EDC.

In the afternoon I went to the Downtown Plano office to conduct a randomization visit for the constipation study. For this particular study, their qualification for the study is assessed by an electronic symptom diary that the subjects are given at their screening visit. When the patient is in the office you run a report to see if the patient can be randomized. The subject qualified but had taken rescue medication too recently to be randomized, so they had to be rescheduled. I finished the day by catching up on some data entry.

Week 20:

October 27, 2014

This morning I conducted a randomization visit for gout study. This visit involved reviewing the subject's labwork, performing an EKG, and a full physical with a physician. After ensuring that the subject meets inclusion/exclusion criteria, they can be randomized into the study and dispensed the study medication. Today we also had a monitor visit for the gout study. Thus, I spent the morning making sure all data entry is up to date and site logs were complete.

Another subject in the study called to report a gout flare, so I documented the flare and medication the subject took for the pain.

October 28, 2014



This morning I went to the Downtown Plano office to conduct 2 subject visits. This first was a followup visit for the opioid induced constipation study. This visit involved vitals, patient questionnaires, physician symptom assessment, and compliance assessment. The next patient did not end up showing up. I reached out to the subject to schedule an appointment at earliest convenience.

Later, I went back to the main office to get a number of different regulatory documents and patient source. Two new studies have delegation logs that need to be completed. The delegation log must be signed by everyone involved in the conduction of a research trial.

October 29, 2014

This morning I assisted with patient visits for the nocturia study and an older gout study. After the visit I assisted with data entry and specimen processing. ACRC Trials also had a site initiation visit for the upcoming cold sore study. I met with the monitor to be briefed on the protocol and study details. The PI also sat in for a portion of this meeting.

October 30, 2014

This morning I went to the Downtown Plano clinic to conduct a patient visit for the opioid induced constipation study. This visit involved vitals, IP compliance assessment, physician assessment, and patient questionnaires. After the visit I entered patient data into the EDC. Next, I went back to the main office to conduct an end of study visit for the constipation study. This visit involved collecting the electronic diary, collecting lab samples, patient questionnaires, and a physical with physician. After the visit, I processed labs and entered the visit data into the EDC.

October 31, 2014

This morning I assisted with getting various regulatory signatures for a number of upcoming studies. Afterwards, I trained a new coordinator on entering visit data into the EDC for the constipation study. Next, I worked on the Investigator Site Binders to make sure all documentation is up to date, and all monitor notes have been addressed.

Week 21:

November 3, 2014

This morning I conducted a follow-up visit for the gout study. This visit involved the collection of pharmacokinetic samples. These are timed blood draws, guided by the time of dosing. This visit involved a predose sample, a 45 minute sample, and a 1 hour sample. Vitals, physical exam, patient questionnaires, and IP dispensation/collection was also performed. After the visit, I processed the lab specimens and entered the visit data into the EDC.

November 4, 2014

This morning I continued work on resolving notes left by the monitor in various Investigator Site Binders. In the afternoon, I continued editing and improving my thesis.

November 5, 2014

This morning I conducted a patient visit at the downtown Plano office. It was a followup visit for the constipation study. This visit involves vitals, lab sample collection, patient questionnaires, IP dispensation/collection, and physical exam with the PI. After the visit, I processed the labs and entered visit data into the EDC. In the afternoon, I went back to the main office to assist with a follow-visit for the gout study. This visit involved a compliance assessment and lab sample collection. After the visit, I trained a new coordinator on proper specimen processing.

November 6, 2014

This morning I conducted 2 follow up visits and a randomization visit for the constipation study at the downtown Plano office. These visits included vitals, lab sample collection, patient questionnaires, IP dispensation/collection, and physical exam with the PI. After the visits, I processed the lab specimens for shipment and entered the visit data into the EDC. In the afternoon, I continued working on my thesis.

November 7, 2014

In the morning, I was tasked with getting a number of signatures from the physicians in the clinic upstairs. After, I worked with the regulatory specialist to prepare the proper documentation for changing the PI for one of the asthma studies currently being managed by ACRC Trials.

Later, I worked on the close-out procedures for two studies that have recently ended. This involves gathering and scanning pertinent documentation for easy access in the case of an FDA audit. All hard copies of study documentation are boxed, sealed, and stored at an offsite facility for 10 years.

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