Rainey, Evan E., Resilience Over Time in a Longitudinal Study Following Patients with Physical Injury. Master of Science (Biomedical Sciences), November, 2013, 97 pp., 6 tables, bibliography, 42 titles.

Purpose: The goal of the practicum study was to examine psychological resilience among individuals admitted to a Level I trauma center at the time of injury and one year post injury. Hypothesis: Resilience remains stable in individuals over time, regardless of injury type or severity.

Methods: This prospective cohort study included patients ≥18 years of age admitted to a Level 1 trauma center for ≥24 hours. Resilience and depression were measured at baseline and 12 months using the Connor Davidson Resilience Scale 10-Item (CD-RISC 10) and the Patient Health Questionnaire (PHQ-8). Injury-related variables included Glasgow Coma Score (GCS), Injury Severity Score (ISS), etiology of injury, and type of injury.

Results: The sample size consisted of 110 subjects. Data suggested that there was no significant change in overall resilience. There were negative correlations between resilience and depression. There were also negative correlations between GCS and depression at baseline and 12 months. Analysis of demographic variables revealed a positive correlation among education level and resilience, as well as a significant association between baseline resilience and employment.

Conclusion: Resilience did not change over time, suggesting that resilience appears to be more of an inherited trait, rather than a modifiable state. These results show that individuals who have low resilience are more likely to be depressed at 12 months post injury. The results of this study suggest that assessing resilience at the time of injury may be useful in identifying those at risk for depression in the year following injury. Further, this study supports the need for psychological support for individuals who have sustained a traumatic injury to improve outcome.

RESILIENCE OVER TIME IN A

LONGITUDINAL STUDY FOLLOWING

PATIENTS WITH PHYSICAL INJURY

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RESILIENCE OVER TIME IN A LONGITUDINAL STUDY FOLLOWING PATIENTS WITH PHYSICAL INJURY

INTERNSHIP PRACTICUM REPORT

Presented to the Graduate Council of the

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University of North Texas

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In partial Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

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CHAPTER 1

INTRODUCTION

Resilience is defined by Bonanno (2004) as

> "the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event such as the death of a close relation or a violent or life-threatening situation to maintain relatively stable, healthy levels of psychological and physical functioning . . . as well as the capacity for generative experiences and positive emotions."

According to the American Psychological Association, resilience is associated with a number of factors, including social support, the capacity to make realistic plans, communication skills, a positive view of oneself, confidence, and the capacity to manage strong emotions (American Psychological Association Help Center, 2004). Southwick and colleagues (2005), suggest that resilience is a combination of both neurobiological and psychological factors, such as serotonin (5-HT), norepinephrine, neuropeptide Y, dopamine, corticotropin-releasing hormone (CRH), dehydroepiandrosterone (DHEA), cortisol, positive emotions and optimism, humor, cognitive flexibility, acceptance, religion/spirituality, altruism, social support, role models, coping style, exercise, capacity to recover from negative events, and stress inoculation (Southwick et al., 2005). Accordingly, it is proposed that individuals who possess a greater number of these attributes are more likely to adapt to disruptive events such as severe injury, loss of a loved one, or traumatic events, whereas individuals who have fewer of these attributes, are less likely to successfully adapt to these disruptive events and adversity (White et al., 2010).

The concept of resilience stems from the branch of psychology called "positive psychology" (White et al., 2010). This practice aims to study the strengths and virtues that enable

individuals and communities to thrive. Positive psychology attempts to draw the attention away from the pathology of health and instead, towards positive variables (eg.,hope, wisdom, creativity, future mindedness, courage, spirituality, responsibility, perseverance) that not only improve quality of life, but also prevent the pathologies that arise when an individual lacks the "positive features that make life worth living" (Seligman & Csikszentmihalyi, 2000).

Many studies have examined the idea of resilience as it relates to personality traits versus personality states. The two theories of resilience suggest that resilience is (a) an inherited trait that remains relatively stable despite life circumstance, or (b) that resilience is a state-like variable compromised of behaviors, thoughts, and actions that can be taught and enhanced (American Psychological Association Help Center, 2004; Luthar, 2000; White et al., 2010).

To support the state-like theory of resilience, Luthar (2000) evaluated the constructs of resilience and defined resilience as "a dynamic process encompassing positive adaptation within the context of significant adversity." She refers to resilience as a "developmental progression that despite adverse events, involves the creation and addition of new strengths and vulnerabilities." Likewise, the American Psychological Association (APA) Help Center (2004) states that "resilience is not a trait that people either have or do not have. It involves behaviors, thoughts, and actions that can be learned and developed in anyone." The APA also describes the process of developing resilience as a "personal journey," as not all individuals react the same way to traumatic life events or stress. They give 10 steps that an individual can follow to develop or improve upon resilience such as, "accept that change is part of life," "maintain a hopeful outlook," "look for opportunities for self-discovery," and "avoid seeing crises as insurmountable problems" (American Psychological Association Help Center, 2004). Rutter (2006) compares the concept of resilience to the body's process of developing immunity to an infectious agent after

prior exposure. In this analogy, Rutter emphasizes a concept termed the "steeling" effect, in which an experience of stress or adversity sometimes strengthens resistance to later stress, just as the body's immune system would strengthen in response to a prior exposure to infection. He defines the "steeling" effect as a combination of "physiological adaptation, psychological habituation, a sense of self-efficacy, the acquisition of effective coping strategies, and/or a cognitive redefinition of the experience" (Rutter, 2006).

In contrast, Miller (1988) describes the impact of traumatic life events as mediated by "factors such as body chemistry and personality traits, which may predispose an individual to greater resilience or greater vulnerability to life stressors" (Miller, 1988). In a multi-informant twin study, Waaktaar and Torgersen (2012) studied the role of genetic and environmental factors in explaining variation in resilience in adolescents. Their study included 2,638 monozygotic and dizygotic twins aged 12 -18 years and reared in the same household. Their results indicated that psychological resilience was determined by additive genetic factors rather than non-shared environmental factors (Waaktaar & Torgerson, 2012). On the same note, White and colleagues (2010), in a study examining resilience in a spinal cord injury (SCI) population of 42 subjects at a rehabilitation hospital, found that resilience did not change from time of admission to time of discharge and, therefore, supported the theory that resilience is a trait that remains stable throughout life, despite life circumstance (White et al., 2010).

Increasingly, negative psychological consequences of severe injury and trauma are being recognized as influencers of outcome and quality of life. However, less attention has been given to factors, such as resilience, that may have a buffering effect on these negative consequences post injury. Ong and colleagues (2010), found that individuals with high psychological resilience exhibited increases in daily positive emotions, which subsequently led to decreases in pain

catastrophizing and increases in cognitive resilience to subsequent pain. Pain catastrophizing was defined as an exaggerated negative response to actual or anticipated pain (Ong et al., 2010).

Traditionally, research on the topic of resilience has focused on traumatic life events, such as the September 11th terrorist attacks (Bonanno, 2006), bereavement of a loved one or significant other (Bonanno, 2005), or on resilience in spinal cord injury (SCI) patients in the rehabilitation setting (Quale & Schanke, 2010; White et al., 2010). This practicum project is interested in resilience in a population of individuals who have sustained a traumatic injury to observe if results differ in any way. Little, if any, research exists on how injury-related variables, such as injury etiology or severity, may impact resilience. Thus, this project will contribute to the understanding of traumatic injury and resilience to better understand the interplay of these variables. Finally, the concept of resilience as a possible predictor of depression will be examined.

This practicum project examined resilience in individuals who were admitted to a Level I trauma center following injury and tested the hypothesis that resilience remains stable in individuals over time, regardless of injury type or severity, suggesting that resilience functions as a trait rather than a modifiable state. Patients were enrolled at the time of the hospital admit and followed twelve months later. Data for this study was taken from the Baylor Trauma Outcome Project (BTOP), a prospective longitudinal study of injured patients at Baylor University Medical Center (BUMC) in Dallas, Texas. BTOP has currently enrolled 419 trauma patients, with 150 subjects having completed a twelve-month follow-up. The Connor-Davidson Resilience Scale 10-Item (CD-RISC 10) was used to measure resilience and the Patient Health Questionnaire 8 (PHQ-8) was used to measure depression in the sample (Connor & Davidson, 2003; Sills & Stein, 2007; Kroenke, 2007). The relationship of resilience and injury variables,

including the Glasgow Coma Score (GCS), Injury Severity Score (ISS), etiology of injury, and type of injury (blunt versus penetrating), were examined.

CHAPTER 2
PRACTICUM PROJECT
BACKGROUND AND LITERATURE

White and colleagues (2010) examined 42 adults with spinal cord injuries (SCI). These subjects were sampled from an inpatient SCI program at a free-standing rehabilitation hospital in the southwestern United States. This study used the Connor-Davidson Resilience Scale (CD-RISC) to measure resilience, the Patient Health Questionnaire (PHQ-9) to measure depressive symptoms, the Functional Independence Measure (FIM) to measure functional ability, the Intrinsic Spirituality Scale (ISS) to measure spirituality, and the Satisfaction With Life Scale (SWLS). Data was collected at 3 intervals during rehabilitation, including the first week of admission, the third week after admission, and the week of discharge. The aims of the study were to (a) identify changes in resilience and indicators of adjustment (depression, functional independence, spirituality, and satisfaction with life), and (b) examine the relationship between each variable during the inpatient rehabilitation of individuals with a SCI. Their results indicate that resilience did not change over time, supporting the trait-theory of resilience mentioned earlier. This study also found a negative relationship between resilience and depression, suggesting that individuals with higher resilience also report decreased depressive symptoms. A positive correlation between resilience and satisfaction with life was also found to be significant (White et al., 2010).

Similarly, Quale and Schanke (2010) estimated the prevalence of resilience, recovery, and distress trajectories in individuals with a severe injury during inpatient rehabilitation. This

study used a population of 80 individuals from the Sunnaas Rehabilitation Hospital (SRH) in Norway. The population of interest all suffered from a "severe physical injury," which was classified as either a spinal cord injury (SCI) or multiple trauma (MT). A MT was defined by having a New Injury Severity Score (NISS) higher than 15 and at least two injuries classified in the Abbreviated Injury Scale (AIS) (Association for the Advancement of Automotive Medicine, 1998). The term *resilience* was used in the context of "a minor disruption of psychosocial functioning and low emotional burden (such as no symptoms of anxiety, depression, or PTSD)." Their study measured three trajectories: *resilience trajectory,* characterized by no symptoms of major distress over time; *recovery trajectory,* characterized by initial symptoms of distress with a significant decrease in symptom scores later in the rehabilitation process; and *distress trajectory,* characterized by high levels of distress throughout the rehabilitation process. Their results indicated that the most common trajectory of adaptation to a severe physical injury was the resilience trajectory (54%), followed by the recovery trajectory (25%) and the distress trajectory (21%), implying increased resilience was the most common response to physical injury in more than half of the subjects. In relation to injury-related variables, the only significant findings were that subjects in the distress trajectory experienced higher levels of pain at admission than subjects in the resilience trajectory, and that participants in the resilience trajectory had more traumatic causes of injury than participants in the recovery trajectory. Although not statistically significant, participants in the recovery trajectory had the highest injury severity scores (Quale & Schanke, 2010).

Kilic et al. (2013) conducted a cross-sectional study on 60 subjects with SCI at the Hampstead Rehabilitation Centre in Australia. This study used the Connor-Davidson Resilience Scale (CD-RISC 10) scale to measure resilience in this population. Their goal was to (a) measure

the incidence of resilience, self-efficacy, locus of control, and psychological distress, and (b) examine the relationships between resilience, psychological distress, demographic, and SCI variables. Their results showed that the majority (58%) of respondents reported moderate to very high resilience scores ($t_{\text{CD-RISC 10}}$ score $\geq$30). This study also found that resilience correlated significantly with high self-efficacy, internal locus of control, and low psychological distress. In addition, resilience was not significantly influenced by degree of neuropathic pain, time since injury, gender, or SCI diagnosis. No statistically significant relationship between resilience and injury severity was found in their sample (Kilic et al., 2013).

Shin et al. (2012) showed a decrease in resilience and increase in depression following a spinal cord injury (SCI) at 6 months. This study was conducted on 36 subjects with spinal cord injuries (SCI) admitted to the Department of Rehabilitation Medicine between 2007 and 2008 in Seoul, South Korea. The inclusion criteria required that subjects be older than 15 years of age at the time of injury and have no previous psychological history. The sample was comprised of 29 subjects of traumatic SCI and 7 subjects with non-traumatic SCI. The examiners used the Beck Depression Inventory (BDI) to measure depression, the World Health Organization Quality of Life Questionnaire-BREF (WHOQOL-BREF) to measure quality of life, the Stress Response Inventory (SRI) to measure stress, and the Connor-Davidson Resilience Scale (CD-RISC) to measure resilience. Their results found an increase in both prevalence and severity of depressive symptoms, as well as a slight decrease in resilience. However, these results were based on a small sample and have not been replicated (Shin et al., 2012).

Similar to the study by Shin et al. (2012), Simeon et al. (2007), found that resilience is negatively associated with childhood trauma in a population of 54 healthy adults, implying that adults who experienced a traumatic event in adolescence are less resilient than adults who did

not experience a traumatic event in adolescence. This study used the self-report Childhood Trauma Questionnaire-short version consisting of 25 items rated on a 5-point scale measuring emotional abuse, emotional neglect, physical neglect, physical abuse, and sexual abuse. Their results also found resilience to be positively correlated with secure attachment in adolescence (Simeon et al., 2007).

Bonanno (2006) studied the prevalence of resilience in a sample of 2,752 residents in New York City and contiguous geographic areas in New York State, New Jersey, and lower Fairfield County in Connecticut during the 6 months following the terrorist attacks on September 11, 2001. Resilience was defined as having either no posttraumatic stress disorder (PTSD) symptoms (high resilience) or as having at least one PTSD symptom (low resilience). PTSD was measured using the National Women's Study PTSD module. The study subjects were divided into groups based on exposure: those who were in the World Trade Center at the time of the attacks, those that witnessed the events from the outside, those that had a friend or relative killed, those that lost possessions, those physically injured, those involved in a rescue, those that lost employment, those involved in a rescue and saw the attacks, and lastly, those that lost a friend or relative and saw the attacks. The results demonstrated high resilience among subjects in all groups, but showed posttraumatic stress disorder (PTSD) to be twice as common in respondents who were in the World Trade Center at the time of the attack compared to those who witnessed the attacks in person from outside the World Trade Center. Of note, people who were physically injured in the attacks had a relatively high PTSD prevalence (26.1%), but a relatively low prevalence of resilience (32.8%) (Bonanno, 2006).

In 2012, Bonanno investigated longitudinal trajectories of depression and anxiety symptoms following a spinal cord injury (SCI), as well as the predictors of those trajectories.

This was a longitudinal study involving 233 subjects assessed at four time points: within 6 weeks, 3 months, one year, and 2 years from time of injury. The population for this study comprised of patients with newly acquired injuries recruited from selected British, Swiss, Swedish, German, Austrian, and Irish spinal centers. Their analysis found 3 trajectories of depression and anxiety: a resilient pattern of stable, low symptoms, a pattern of high symptoms followed by improvement (recovery), and delayed symptom elevations. A chronic high depression pattern also emerged. Results indicated that overall, the majority of SCI patients demonstrated considerable psychological resilience (50.2%). Their results also found high, chronic depressive symptoms in 10.7% of subjects and delayed depression, characterized by low initial levels of depression, followed by high, chronic levels within 12 weeks to one year after injury, in 9.8% of subjects (Bonanno, 2012).

McCauley and colleagues (2012) studied the effects of preinjury resilience and mood on outcome following mild traumatic brain injury (mTBI). Their study examined 75 patients admitted to two Level I trauma centers in Houston, Texas. The sample was divided into two groups, one with mild TBI, and a second as a comparison group with orthopedic injuries excluding the head. Inclusion criteria included patients aged 18-50 years who presented, were treated, and then released from the Emergency Department less than 24 hours after injury, fluent in either Spanish or English, and diagnosed with a mild traumatic brain injury (mTBI). The measures administered in this study included the Connor-Davidson Resilience Scale (CD-RISC), the Center for Epidemiologic Studies Depression Scale (CES-D), the Acute Stress Disorder Scale (ASDS), the PTSD Checklist-Civilian Form (PCL-C), and the Rivermead Post Concussion Symptoms Questionnaire (RPCSQ). Patients were assessed at baseline, one week, and months 1, 3, and 6 after injury. Their results found that the two groups did not differ on preinjury resilience

or mood status at baseline, but differed significantly on measures of anxiety and postconcussion symptoms on subsequent follow ups. McCauley and colleagues' results indicate that preinjury depressed mood and resilience are significant contributors to the severity of postinjury anxiety and postconcussion symptoms (McCauley, 2012).

On the topic of depression, Bombardier and colleagues (2010) studied the rates of major depressive disorder following traumatic brain injury (TBI) in 559 patients admitted to Harborview Medical Center, a Level I trauma center in Seattle, Washington. Inclusion criteria included radiological evidence of acute traumatically induced brain abnormality or a Glasgow Coma Score (GCS) less than 13. GCS is assessed on a continuous scale between 3 and 15. Scores between 3 and 8 indicate a severe head injury, scores between 9 and 12 indicate a moderate head injury, and scores between 13 and 15 indicate a mild head injury. Patients who were homeless, under the age of 18 years, spoke a language other than English, had no contact information, had been incarcerated, had been diagnosed with schizophrenia, or had a blood alcohol level (BAL) exceeding 199 mg/dL upon admission, were excluded from the study. The Patient Health Questionnaire 9-item (PHQ-9) was administered to identify cases of Major Depressive Disorder (MDD). Data was collected at baseline and months 1, 6, 8, 10, and 12 after injury. Participants were considered positive for MDD if they presented with either depressed mood or anhedonia, and a total of 5 or more symptoms of MDD during the prior two-week period. Their results proved that 53.1% of their population met the criteria for Major Depressive Disorder during the first year after a traumatic brain injury, a rate 7.9 times higher than would be expected in the general population (Bombardier, 2010; CDC).

Similarly, Bryant and colleagues (2010) studied the psychiatric consequences of traumatic injury and traumatic brain injury. This study included 1084 patients admitted to four

Level I trauma centers in Australia. The Mini International Neuropsychiatric Interview, version 5.5; the Clinician-Administered PTSD Scale–IV (CAPS); and the World Health Organization Quality of Life–Abbreviated Version scale (24) were used to collect the variables of interest. Assessments occurred at baseline, 3, and 12 months after injury. Inclusion criteria included hospital admission of more than 24 hours, ages between 16 and 70 years, and ability to understand and speak English. Patients were excluded if they had moderate or severe brain injury (defined as loss of consciousness of greater than 30 minutes or a Glasgow Coma Score (GCS) less than 13), were currently psychotic or suicidal, were non-Australian visitors, or were under police guard. Of significance, 31% of patients reported a psychiatric disorder and 22% developed a psychiatric disorder that they had never experienced before at 12 months after injury. The most common new psychiatric disorders were depression (9%) and generalized anxiety disorder (9%) (Bryant, 2010).

Zatzick et al., (2003), explored the relationship between somatic, posttraumatic stress, and depressive symptoms among 73 trauma surgery patients at a Level I trauma center. The inclusions for this study were the ability to understand and speak English and subjects between the ages of 14 and 65 years. Patients were administered a one hour interview while in the hospital and then reinterviewed over the phone one month, 4 months, and 12 months after the traumatic injury. The 15-item Patient Health Questionnaire somatic symptom subscale was used to measure physical symptoms, the civilian version of the PTSD Checklist was used to measure PTSD symptoms, and the Center for Epidemiological Studies Depression Scale (CES-D) was used to measure depressive symptoms. Their results indicated that 38% of the patients had either high levels of PTSD, depressive symptoms, or both. Results also indicated that females demonstrated significantly higher depressive symptoms than males. Injury severity score (ISS),

chronic medical conditions, and age were not associated with higher depressive symptom levels at 12 months (Zatzick et al., 2003).

Etiology of injury and depression rates were studied by deRoon-Cassini and colleagues (2010). A latent class growth curve model was used to measure the trajectories of PTSD and depression following a traumatic injury in 330 trauma patients. Participants were assessed during hospitalization and at months 1, 3, and 6 after injury. The Acute Stress Disorder Interview (ASD-I), the Posttraumatic Stress Diagnostic Scale (PDS), the Brief Symptom Inventory (BSI), and the Center for Epidemiologic Studies Depression Scale (CESDS) were used to measure acute stress disorder, PTSD, and depression. Covariates were explored, including coping self-efficacy, anger, education level, and mechanism of injury. Mechanism of injury was broken up into the following groups: injured due to an automobile crash (47.4%), gunshot wound (16.4%), fall (8.0%), motorcycle crash (6.5%), aggravated assault (4.8%), pedestrian struck by vehicle (4.6%), stab wound (4.2%), industrial accident (4.3%), injured by snowmobile (1.6%), falling object (1.3%), and home accident (0.9%). In general, 74.6% of participants were injured unintentionally and 25.4% were injured due to the intention of another human being. Results found four trajectories of PTSD and depression symptoms: *chronic distress* (sharply elevated symptoms at baseline and a gradual increase across time), *delayed distress* (flat but moderate level of symptoms that increased sharply at 6 months), *recovered* (initial increases in symptoms that declined sharply at 6 months), and *resilient* (low level of depression symptoms and a slightly declining, but largely flat trajectory across time). Individuals in the chronic distress trajectory were more likely to have been assaulted, had higher levels of anger, and had less coping self-efficacy. Interestingly, their results also showed that when the injury was committed intentionally, by another human being,

the probability that a participant would exhibit chronic psychological distress was increased (deRoon-Cassini, 2010).

Depression as it relates to Traumatic Brain Injury (TBI) was evaluated by Jorge and colleagues (2004). In a study examining at 91 patients with TBIs at a Level I trauma center, Major Depressive Disorder (MDD) symptoms were found in 33% of the patients during the first year after injury. Evaluators used the Hamilton Depression Rating Scale to measure depressive symptoms and the Glasgow Coma Score (GCS) to measure TBI severity. Patients were evaluated at baseline, 3, 6, and 12 months after injury. Their results also found that patients with MDD exhibited comorbid anxiety (76.7%), as well as comorbid aggressive behavior (56.7%). Patients with major depression had significantly greater impairment in executive functions and exhibited poorer social functioning at the 6 and 12 month follow up (Jorge, 2004).

An interesting measure of injury severity used in the initial patient assessment is the Glasgow Coma Score (GCS). GCS is a scoring system used to evaluate level of consciousness (Teasdale, 1974). It is divided into three categories: *eye response* (no eye opening, opening to pain, opening to verbal command, opening spontaneously), *verbal response* (no verbal response, incomprehensible sounds, inappropriate words, confused, oriented), and *motor response* (no motor response, extension to pain, flexion to pain, withdrawal from pain, localizing to pain, obeying commands). The minimum score given is 3 and the maximum is 15. Further categorization is used to relate these values to severity of head injury. For example, scores between 3 and 8 designate a severe brain injury, scores between 9 and 12 designate a moderate brain injury, and scores between 13 and 15 designate a mild brain injury (Teasdale, 1974).

Healey and colleagues (2003) surveyed the National Trauma Data Bank to evaluate the reliability of the Glasgow Coma Scale. Of the 204,181 subjects sampled, 80% of the GCS scores

were equal to 15, 6% were equal to 3, and another 6% equal to 14. GCS scores between 4 and 13 were less common, with less than 1% of each observation. Their results found that the motor component (M component) of the GCS scoring system is linearly related to survival and preserves almost all of the predictive power of the GCS scoring system, compared to the eye and verbal components (Healey, 2003).

On a similar note, Teoh and colleagues (2010), conducted an analysis of Glasgow Coma Score (GCS) on patients admitted to the intensive care unit (ICU) at Wellington hospital in New Zealand. Their objective was to determine whether different score permeations, or combinations, of GCS, giving the same GCS total, were associated with significant mortality differences. For example, a GCS of 12, signifying a moderate brain injury, can be calculated from many different combinations: 4E4V4M, 4E6M2V, 1E5V6M, etc., where "E" represents the eye movement component of GCS, "V" represents the verbal component of GCS, and "M" represents the motor component of GCS. The only scores lacking permeations are scores of 3 and 15, because these values can only be calculated with one possible combination of eye, verbal, and motor scores. In this study, GCS and mortality were analyzed using a Fisher's exact test and uni-and multivariate logistic regression, on 1390 patients (813 males, 577 females) with GCS scores between 4 and 14. The average age at injury was 45.9 years (SD = 25.1 years) and the mortality rate was 11.9%. Their results found a significant difference in mortality rates for the different permeations of Glasgow Coma Scores. Teoh and colleagues concluded that this difference may be due to the fact that these scores are composed of very different combinations, with different degrees of head injury. For example, two patients who both present with a GCS of 12, could have vastly different levels of motor coordination, but still maintain a GCS of 12 if their eye and verbal

components were compensatory. Their results also suggest that GCS scores may be more useful in profiles, reported as 3 separate values, rather than as totals (Teoh, 2010).

SPECIFIC OBJECTIVES

This practicum project studied the hypothesis that resilience remains stable in individuals over time, regardless of injury type or severity, suggesting that resilience functions as a trait rather than a modifiable state. Secondarily, this project examined if the following variables assessed at baseline had any influence on resilience at 12 months after injury: Glasgow Coma Score (GCS), Injury Severity Score (ISS), etiology of injury, and type of injury (blunt versus penetrating). Lastly, this project also explored the idea of resilience as a predictor of depressive symptoms at both baseline and 12 months after injury in our trauma population.

SIGNIFICANCE

According to the Centers for Disease Control and Prevention, injuries are the leading cause of death for children and adults ages one year to 44 years, greater than both heart disease and cancer (CDC). They also estimate that more than 180,000 people die every year from injuries, or about one death every 3 minutes (CDC). Finkelstein and colleagues (2006), estimate that the total cost of trauma is about $406 billion per year, including both health care costs and lost productivity (Finkelstein, 2006). Much interest and research over the past years has focused on the psychological effects of injury on the patient. Van der Sluis (1998), found psychological complaints in 84% of the trauma patients he examined and observed that psychological problems tend to persist for much longer than physical ones (Van der Sluis, 1998).

Depression also plays a large role in the psychological outcomes of trauma patients. The National Institute of Mental Health (NIMH), a branch of the National Institute of Health (NIH),

defines Major Depressive Disorder (MDD) as a combination of symptoms that interfere with a person's ability to work, sleep, study, eat, and enjoy once-pleasurable activities" (NIMH). According to the Centers for Disease Control and Prevention (CDC), approximately one in 10 (9.1%) U.S. adults report depressive symptoms. Interestingly, they also cite that rates for both intentional and unintentional injuries are 2-6 times higher among people with mental illness than in the general population (CDC, 2011). On a global perspective, the World Health Organization (WHO) states that unipolar depression was the third most important cause of disease burden worldwide in 2004 (WHO). From an economic standpoint, in 1990, the economic burden of depression in the U.S. was estimated to be $43.7 billion dollars. Ten years later, in 2003, the cost burden increased significantly to $52.9 billion (Greenberg, 2003). Economic burden due to overall lost work performance was estimated by Kessler (2012) to be between $30.1 billion and $51.5 billion per year. This data shows a clear and urgent need for research in the area of depression, especially as it relates to the trauma and severe injury population, from both a health and economic perspective.

MATERIALS AND METHODS

All data was sampled from the Baylor Trauma Outcome Project at the Level I trauma center at Baylor University Medical Center (BUMC). BTOP is a prospective longitudinal study aimed at measuring psychological, physical, and functional outcomes after injury. Currently, the Baylor Trauma Outcome Project has enrolled 419 subjects for baseline data and 150 subjects for 12 month follow ups.

The study design for this practicum project was a prospective cohort study. Participants in the study included patients who were admitted onto both the Trauma and Ortho-Trauma Service admission list. Exclusion criteria included patients who were under the age of 18 years,

patients admitted to the trauma service for less than 24 hours, those unable to provide contact information, those in police custody, those unable to comprehend either English or Spanish, and patients with a traumatic brain injury and/or premorbid cognitive deficits.

Patients who met the criteria to be approached for inclusion in the study were voluntarily enrolled following appropriate informed consent procedures. Baseline measurements were collected in a private room at BUMC using the following assessments: Ohio State University TBI Identification Method Short Form (OSU TBI-ID), the Veterans RAND 12-Item Health Survey (VR-12), the Patient Health Questionnaire 8 (PHQ-8), the Social Provisions Scale (SPS), the Just World Belief Questionnaire, the Conner-Davidson Resilience Scale (CD-RISC), the Primary Care Posttraumatic Stress Disorder Screen (PC-PTSD), the Alcohol Use Disorder Identification Test-Consumption (AUDIT-C), the Numeric Rating Scale (NRS), the McGill Pain Scale, the Pain Catastrophizing Scale (PCS), the Injustice Experience Questionnaire (IEQ), and patient expectancies of recovery. Injury Severity Score (ISS), etiology of injury, type of injury, age at injury, gender, ethnicity, marital status, education level, Glasgow Coma Score (GCS), and zip code were obtained from the BUMC Trauma Registry at baseline.

Twelve month follow ups were conducted within a 4 month window around the participants' due date (2 months before due date through 2 months after). Participants were contacted over the telephone using the contact information provided by the patient at baseline and there was a maximum number of 12 attempts to successfully contact the patient. Reminder postcards and/or emails were sent one week prior to the 4 month window, also using the contact information provided at baseline. All attempts to contact were recorded in a call log. The same measures were administered during these 12 month follow up calls as at baseline, with the following exceptions: the Ohio State University TBI Identification Method Short Form (OSU

TBI-ID) was condensed to the one question short form, the PTSD Checklist, Civilian Version (PCL-C) was added, the Tampa Scale Kinesiophobia form (TSK) was added, a "Return to Work" form was added, and a "Hospitalization History Post Initial Discharge" questionnaire was added.

For the purpose of this practicum project, only data collected from the Connor-Davidson Resilience Scale 10 Item (CD-RISC 10) questionnaire and the Patient Health Questionnaire (PHQ-8) at baseline and 12 month follow up was used in analysis. Accordingly, Glasgow Coma Score (GCS), Injury Severity Score (ISS), etiology of injury, and mechanism of injury, extracted from the trauma registry, were the only injury-related variables used for this study.

Resilience was measured using the Conner-Davidson Resilience Scale 10 Item (CD-RISC 10). This scale was designed as a predictor of outcome to treatment with medication or psychotherapy, a measure of stress management and resilience-building, a marker of progress during treatment, a marker of biological changes in the brain, and as a method to screen people for high, intermediate, or low resilience (Connor & Davidson, 2013; Sills & Stein, 2007). The measure consists of 10 items using a 5-point scale ranging from 0 (*not true at all*) to 4 (*true nearly all of the time*). The scale examines how the participant felt over the past month (e.g., "I am able to adapt when changes occur," "I tend to bounce back after illness, injury, or other hardships"). The maximum score for the CD-RISC measure is 40 and the minimum score is 0. One standard deviation over the sample mean was considered high resilience and one standard deviation below the sample mean was considered low resilience. Accordingly, scores between these two values were considered intermediate resilience.

Depressive symptoms were measured using the Patient Health Questionnaire 8 (PHQ-8). The PHQ-8 is a brief self-report measure of Major Depressive Disorder (MDD) for population-based studies and clinical populations (Kroenke et al., 2009). This is an 8-item questionnaire

derived from the original 9-item (PHQ-9), with the last question regarding suicide assessment removed. The PHQ-8 consists of 8 items that are statements about an individual's affective state (e.g., "Little interest or pleasure in doing things", "Feeling down, depressed, or hopeless"), which are scored with responses ranging from 0 (*not at all*) to 3 (*nearly every day*). The maximum score for the PHQ-8 is 24 and the minimum is 0. A cut-off score equal to or greater than 10 was considered as the cutoff diagnostic value for positive depressive symptoms (Kroenke et al., 2009).

Injury Severity Score (ISS), Glasgow Coma Score (GCS), etiology of injury, and type of injury were collected from the BUMC Trauma Registry following initial enrollment in the study. The Injury Severity Score (ISS) is an anatomical scoring system used to provide an overall score for trauma patients with multiple injuries. Each injury is assigned an Abbreviated Injury Scale (AIS) score and is allocated to one of 6 body regions (head, face, chest, abdomen, extremities, and external) (Baker et al., 1974). The highest AIS score for each region is used and then the 3 highest regions have their scores squared and added together to produce the ISS score. Injuries are ranked on a scale of one to 6, with one being minor, 5 severe, and 6 an unsurvivable injury. The maximum value for ISS is 75 and the minimum is 0 (Copes et al., 1989). ISS can be divided into the following categories based on severity: *mild* (0-8), *moderate* (9-15), *severe* (16-25), and *profound* (26-75) (Bolorunduro, 2011). Glasgow Coma Score (GCS) is a continuous score from 3 to 15, used to assess the level of consciousness of the patient (Teasdale, 1974). It includes three parts: eye response (E), verbal response (V), and motor response (M). A score between 3 and 8 denotes a severe brain injury, a score between 9 and 12 denotes a moderate brain injury, and a score between 13 and 15 denotes a mild head injury. Etiology of injury was categorized into the following categories based on the Baylor Trauma Registry ICD-9 codes: Fall, Stab Wound (SW),

Motor Vehicle Collision (MVC), Bicycle, Gun Shot Wound (GSW), Aggravated Assault (AggAssault), Motorcycle Collision (MCC), Automobile versus Pedestrian (AutoVsPed), and other. Type of injury was grouped into two categories, blunt and penetrating, also based on the Baylor Trauma Registry ICD-9 codes. Demographic variables extracted from the trauma registry included: date of birth, date of injury, age at injury, gender, racial background, Hispanic origin, marital status, education level, employment, income, and pre-morbid psychiatric history.

Means and standard deviations were computed for all variables at baseline and 12 month follow up using SPSS. Normality tests were conducted using Shapiro-Wilk test of normality, prior to running further tests, on resilience and depression scores at both baseline and 12 months. If the variables proved to be normally distributed ($p_{Shapiro\text{-}Wilk} > 0.05$), a paired t test was conducted to test for differences in the means of the two groups being analyzed. If the data proved to be non-normally distributed ($p_{Shapiro\text{-}Wilk} \leq 0.05$), a Wilcoxon signed rank test was performed to test for differences in the variables being analyzed. Pearson Correlations were used to explore relationships between demographic variables, injury-related variables, resilience, and depression at both time points.

RESULTS

The sample size included 110 subjects (44 female, 66 male). The demographics of the subjects are shown in Table 1. Analysis of the demographics revealed that age at injury ranged from ages 18 years to 88 years, with an average age at injury of 46.46 years and a standard deviation of 18.588 years. The sample consisted of 72.1% Caucasian/White, 20.7 % African American/Black, 1.8%% American Indian/Alaska Native, 0.9% both Caucasian and African American, and 3.6% both Caucasian and American Indian/Alaska Native. When considering marital status, 29.7% of the sample were never married, 38.7% were married, 21.8% divorced,

3.6% separated, and 5.4% widowed. The sample was close to evenly divided with regards to employment status, with 51.8% employed and 48.2% unemployed. Analysis of highest education level revealed 2.7% of the sample to have less than an 8th grade education, 18.0% to have between a 9th and 12th grade education, 32.4% to hold a high school diploma, 10.8% to hold an Associate's degree, 22.5% to hold a Bachelor's degree, 7.2% to hold Master's degree, and 0.9 % subjects to hold a Doctoral degree. For the purpose of analysis, education level was divided into two categories, those with a high school diploma or less, and those with greater than a high school diploma. With regards to income level, 24.3% reported a household income of less than $25,000 per year, 11.7% between $25,000 and $49,000 per year, 18.9% between $50,000 and $74,000 per year, 23.4% greater than $74,000 per year, and 19.8% either declined to answer or were unsure and were coded as "unobtainable" income.

Table 1
Demographic Variables

Demographic Variable	N	Percentage
Gender		
Male	66	60
Female	44	40
Racial Background		
Caucasian/White	80	72.1
African American/Black	23	20.7
American Indian/Alaska Native	2	1.8
Both Caucasian & African American	1	0.9
Both Caucasian & American Indian	4	3.6
Hispanic or Latino Origin		
Yes	16	14.5
No	94	85.4
Marital Status		
Never Married	33	29.7
Married	43	38.7
Divorced	24	21.8
Separated	4	3.6
Widowed	6	5.4
Education Level		
≤8th Grade	3	2.7
9-12th Grade	20	18.0
High School Diploma	36	32.4
Some college credits	3	2.7
Associate's Degree	12	10.8
Bachelor's Degree	25	22.5
Some credits of Master's Degree	2	0.9
Master's Degree	5	7.2
Some credits of Doctoral Degree	1	0.9
Doctoral Degree	1	0.9
Employment Status		
Employed	57	51.8
Unemployed	53	48.2
Income		
<$25,000	27	24.3
$25,000 - $49,000	13	11.7
$50,000 - $74,000	21	18.9
>$75,000	26	23.4
Unobtainable	22	19.8
N = Number of subjects		

Injury Severity Score (ISS) was recorded on a continuous scale between 0 and 75. The average ISS for the sample was 11.06, with a range between 0 and 36 and a standard deviation of 7.173. Etiology of injury was categorized into the following categories based on data from the Baylor Trauma Registry: Fall (n = 34), Stab Wound (n = 3), Motor Vehicle Collision (n = 25), Bicycle (n = 0), Gun Shot Wound (n = 8), Aggravated Assault (n = 7), Motorcycle Collision (n = 15), Automobile versus Pedestrian (n = 8), and other (n = 10) (Table 2). Of our sample population, 89.1% suffered from a blunt injury and 10.9% suffered from a penetrating injury (Table 2). Glasgow Coma Score (GCS) is a continuous variable between 3 and 15. The average GCS of the sample upon hospital admittance was 14.43 with a standard deviation of 2.178 and a range between 3 and 15.

Table 2
Injury-Related Variables

Injury-Related Variable	**N**	**Percentage**
Etiology of Injury		
Fall	34	30.6
Stab Wound	3	2.7
Motor Vehicle Collision	25	22.5
Bicycle	0	0
Gun Shot Wound	8	7.2
Aggravated Assault	7	6.3
Motorcycle Collision	15	13.5
Auto vs Pedestrian	8	7.2
Other	10	11
Type of Injury		
Blunt	12	10.9
Penetrating	98	89.1
N = Number of subjects		

Correlations between resilience and depression were found using Pearson Correlation (2-tailed). Analysis revealed a negative correlation between baseline resilience and baseline depression ($p < 0.01$), a positive correlation between baseline resilience and 12 month resilience ($p < 0.01$), a negative correlation

between baseline resilience and 12 month depression ($p < 0.01$), a negative correlation between baseline depression and 12 month resilience ($p < 0.01$), and a positive correlation between baseline depression and 12 month depression ($p < 0.01$) (Table 3).

Table 3
Correlations Between Resilience and Depression

	CD-RISC (BA)	PHQ (BA)	CD-RISC (12 mon)	PHQ (12 mon)
CD-RISC (BA)				
Pearson Correlation	1	-.568**	.387**	-.330**
Sig. (2-tailed)		.000	.000	.000
N	110	110	110	109
PHQ (BA)				
Pearson Correlation	-.568**	1	-.445**	.469**
Sig. (2-tailed)	.000		.000	.000
N	110	110	110	109
CD-RISC (12 mon)				
Pearson Correlation	.387**	-.445**	1	-.484**
Sig. (2-tailed)	.000	.000		.000
N	110	110	110	109
PHQ (12 mon)				
Pearson Correlation	-.330**	.469**	-.484**	1
Sig. (2-tailed)	.000	.000	.000	
N	109	109	109	109
N = Number of subjects CD-RISC = Connor-Davidson Resilience Scale 10-Item PHQ = Patient Health Questionnaire to measure depressive symptoms BA = Baseline measurement				
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).				

Correlations between demographic variables, resilience, and depression were calculated using Pearson Correlation (2-tailed). Analysis revealed a positive correlation between education level and resilience scores at baseline ($p = 0.001$), a negative correlation between education level

and depression at baseline (p = 0.04), a negative correlation between education level and depression at 12 months (p = 0.006), and a positive correlation between employment and resilience at baseline (p = 0.011) (Table 4).

Table 4
Correlations Between Demographic Variables, Resilience, and Depression

	CD-RISC (BA)	PHQ (BA)	CD-RISC (12 mon)	PHQ (12 mon)
Age at Injury				
Pearson Correlation	-.007	.020	-.020	-.064
Sig. (2-tailed)	.994	.838	.834	.506
N	110	110	110	109
Educational Level				
Pearson Correlation	.307**	-.196*	.179	-.264**
Sig. (2-tailed)	.001	.040	.061	.006
N	110	110	110	109
Income				
Pearson Correlation	-.042	-.094	.167	-.134
Sig. (2-tailed)	.666	.328	.080	.166
N	110	110	110	109
Employment				
Pearson Correlation	.261*	-265	.098	-.186
Sig. (2-tailed)	.011	.070	.309	.053
N	110	110	110	109
N = Number of subjects CD-RISC = Connor-Davidson Resilience Scale 10-Item PHQ = Patient Health Questionnaire to measure depressive symptoms BA = Baseline measurement				
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).				

Correlations between injury-related variables, such as Glasgow Coma Score (GCS), Injury Severity Score (ISS), etiology of injury, and type of injury were examined using the Pearson Correlation (2-tailed). Of these variables, only GCS and ISS proved to hold any

statistical significance to resilience and depression at either time point. Analysis revealed a positive correlation between GCS and resilience scores at both baseline and 12 months ($p_{BA} = .007$, $p_{12} < 0.01$) and a negative correlation between GCS and baseline depression ($p = .001$) (Table 5). A negative correlation was also found between GCS and ISS ($p = 0.031$) (Table 6).

Table 5
Correlation Between Injury-Related Variables, Resilience, and Depression

	CD-RISC (BA)	PHQ (BA)	CD-RISC (12 mon)	PHQ (12 mon)
GCS				
Pearson Correlation	.257**	-.309**	.338**	-.172
Sig. (2-tailed)	.007	.001	.000	.073
N	110	110	110	110
ISS				
Pearson Correlation	-.029	.028	-.080	.114
Sig. (2-tailed)	.762	.775	.408	.239
N	110	110	110	110
N = Number of subjects CD-RISC = Connor-Davidson Resilience Scale 10-Item PHQ = Patient Health Questionnaire to measure depressive symptoms BA = Baseline measurement GCS = Glasgow Coma Score ISS = Injury Severity Score				
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).				

Table 6
Correlations Between GCS and ISS

	GCS	ISS
GCS		
Pearson Correlation	1	-.206*
Sig. (2-tailed)		.031
N	110	110
ISS		
Pearson Correlation	-.206*	1
Sig. (2-tailed)	.031	
N	110	110
N = Number of subjects GCS = Glasgow Coma Score ISS = Injury Severity Score		
*. Correlation is significant at the 0.05 level (2-tailed).		

To test for a change in resilience scores at baseline and 12 months, a test of normality (Shapiro-Wilk test) was first performed to check for normal assumption in the data. The test statistic for Shapiro-Wilk test was 0.9299 and the p value was <0.0001. Based on this p value, the data was not normally distributed, so a Wilcoxon signed rank test (non-parametric test) was then performed to test for the change in resilience scores. Analysis revealed no significant change in resilience scores at baseline and 12 months (T = -60.5, p = 0.84). Similar statistical methods were used to test for a change in depression scores at baseline and 12 months. A Shapiro-Wilk test of normality confirmed the data was not normally distributed (W = 0.94, p = 0.0002), therefore, a Wilcoxon signed rank test (non-parametric test) was again performed to test for a difference in depression scores. Analysis revealed no significant change in depression scores from baseline to

12 months (T = 195.5, p = 0.43).

Baseline resilience scores were then divided into 3 groups, low (n = 15), intermediate (n = 74), and high (n = 21), based on one standard deviation above and below the sample mean of 31.34. A Shapiro-Wilk test for normality revealed the low resilience group to be normally distributed ($W = 0.94$, $p = 0.35$), so a paired t test was performed to check for a difference in the means of resilience scores at baseline and 12 months. Analysis revealed that there was, in fact, a significant difference between the resilience scores at baseline and 12 months for those categorized as having low resilience (1 SD below the mean) at baseline ($T = -2.85$, $p = 0.012$). The Shapiro-Wilk test for normality proved the intermediate and high resilience groups were not normally distributed ($W_I = 0.96$, $W_H = 0.65$, $p_I = 0.036$, $p_H < 0.001$). A Wilcoxon signed rank test was, therefore, performed on both sets of data to test for a difference in the scores at baseline and 12 months. Analysis revealed no significant difference in resilience scores for those categorized as having intermediate resilience at baseline ($T = -38.0$, $p = 0.82$). However, analysis of those categorized as having high resilience at baseline revealed a significant difference between scores at baseline and 12 months ($T = 56.5$, $p = 0.005$).

Based on this data, a difference in resilience was analyzed for those categorized as having no depression (PHQ scores <10) and those categorized as having depressed symptoms (PHQ scores ≥10) to see if resilience had some predicting effect on depression scores. A Shapiro-Wilk test for normality was performed on both groups. The non-depressed group was deemed normal ($W = 0.95$, $p = 0.21$), so a paired t test to test for a difference in means was performed. Analysis revealed no significant difference in resilience scores at baseline and 12 months for the non-depressed group ($T = -0.33$, $p = 0.74$). The Shapiro-Wilk test for normality on the depressed group proved the data to be non-normally distributed ($W = 0.91$, $p < 0.0001$), so a Wilcoxon signed rank test was used to test for a difference in the resilience scores. Analysis revealed no

significant difference in resilience scores at baseline and 12 months for the depressed group (T = -14.0, p = 0.94).

DISCUSSION

In conclusion, this practicum project hypothesized that resilience remains stable in individuals over time, regardless of injury type or severity, suggesting that resilience functions as a trait rather than a modifiable state. Secondarily, this project examined if the following variables assessed at baseline, Glasgow Coma Score (GCS), Injury Severity Score (ISS), etiology of injury, and type of injury (blunt v. penetrating), had any influence on resilience at 12 months. Lastly, this project also explored the idea of resilience as a predictor of depressive symptoms, at both baseline and 12 months, in our trauma population.

Based on the data found in this study, multiple conclusions can be drawn. First, the primary hypothesis that resilience remains stable in individuals over time, regardless of injury type or severity, proved to be correct, suggesting that resilience functions as a trait rather than a modifiable state. Second, depression also appeared to remain stable in the sample over time, regardless of injury type or severity. Analysis of the data also revealed that there was no change in the resilience scores based on depressive symptoms, suggesting that a patient's outcome, post-injury, cannot be predicted based on initial depressive symptoms alone. Thirdly, a significant difference in resilience scores at baseline and 12 months was revealed when resilience categories (low, intermediate, high) were examined separately. The data analysis of low and high resilience groups at baseline and 12 months shows that individuals with low resilience at baseline, become less resilient at 12 months, and individuals with high resilience at baseline become more resilient at 12 months. This data supports the trait theory of resilience in that individuals appear to move closer to their inherent resilience category, giving way to a more definitive categorization.

Further analysis on this topic should be performed on a larger sample size to determine if the change in CD-RISC means at baseline and 12 months is coming from shifts from within or between categories, as well as to determine if this trend continues in a larger sample.

Resilience scores at baseline appeared to be negatively correlated with depression symptoms at both baseline and 12 months post-injury. In other words, a patient who presents with low resilience at the time of injury has a greater chance of experiencing high depressive symptoms 12 months post injury than a patient who presents with intermediate or high resilience at time of injury. These results suggest that identifying individuals with low resilience at time of injury may help identify those at risk for depression one year after injury.

A significant association was found between Glasgow Coma Scores and resilience at baseline, resilience at 12 months, depression at baseline, and Injury Severity Score. No significant correlation between Injury Severity Score and resilience or depression was found, which may suggest that Glasgow Coma Score is a better indicator of patient outcome than Injury Severity Score, though further analysis is needed. These data do, however, suggest that patients who present with a lower Glasgow Coma Score at the time of injury are more likely to be depressed at baseline and show lower resilience at both baseline and 1 year after injury. One limitation to the use of the Glasgow Coma Score in analysis, though, is that the data for GCS was heavily skewed to the right, or to higher GCS scores. This is appropriate when one considers that all data was extracted from patients enrolled in the Baylor Trauma Outcome Project (BTOP) and patients must be cognitively stable and able to understand and comprehend the study in order to be enrolled and to complete the informed consent process. Generally speaking, patients with lower GCS scores at time of injury are more likely to have experienced a traumatic brain injury and may not be as cognitively capable of completing the informed consent process, as patients

who present with higher GCS scores at time of injury. Therefore, it makes sense that the data is composed of few GCS scores 13 or less. The results did not yield any significant associations between etiology of injury or type of injury (blunt versus penetrating) on resilience or depression at either time point.

A significant, positive correlation among education level and resilience at both baseline and 12 months was found upon analysis. A significant association between employment and baseline resilience was also found. These results suggest that patients who hold a college degree are more likely to be resilient at both the time of traumatic injury and at 12 months post injury. These results also suggest that patients who are employed at the time of injury are more likely to present with high resilience.

SUMMARY AND CONCLUSIONS

In conclusion, the data supported the primary hypothesis, in that resilience scores, overall, did not change from baseline to 12 months, supporting the trait theory of resilience and upholding the conclusions of Miller (1988), Waaktaar and Torgersen (2012), and White and colleagues (2010). However, an interesting finding, when resilience was broken up into categories (low, intermediate, and high), a significant difference was revealed between resilience scores for the low and high categories, further supporting the trait theory. Although, it is unclear if these changes are due to shifts among the groups or between the groups, and, therefore, further analysis and studies must be executed before conclusions and inferences can be made. Furthermore, this data may help us in identifying patients at risk for depression after injury, as resilience at time of injury was correlated to depressive symptoms at 12 months.

This practicum project expands upon the underexplored relationship that resilience has with depression, Glasgow Come Score (GCS), injury severity, and mechanism of injury. While these variables proved to have no effect on resilience change in our population, these results could add to areas of future research on the effect these variables may have on individuals who present with low depression at the time of injury, to see if those patients are more susceptible to negative psychological outcomes. These results also illustrate the importance of understanding the psychological needs of patients at time of injury, as injury-related variables proved not to be indicators of later outcome in this study.

As the costs of healthcare continue to rise, the need to understand the factors driving the outcome and quality of life in patients who have experienced severe or traumatic injury is essential. Increasingly, the relationship between psychological health and quality of life, physical outcome after injury, and overall physical health is being recognized and appreciated. Identifying those at risk for later complications, prior to discharge, may improve patient outcome, decrease readmission rates, decrease ongoing adverse health issues, and aid in the successful reintegration of individuals into their previous lives. This data shows a clear and urgent need of research in the field of trauma and on the association between severe injury and negative psychological consequences thereof. The results of this study reveal the necessity of psychological support for patients who experience severe or traumatic injury to improve outcome and quality of life.

LIMITATIONS

One limitation to this study is the inherent self-report bias in the questionnaires. Another limitation is that the data is taken from a convenience sample at Baylor University Medical Center's (BUMC) trauma center, although the BUMC trauma population has proven to be representative of the overall trauma population.

One further imitation is the use of the Glasgow Coma Score in analysis. As mentioned earlier, the data for GCS was heavily skewed to the right, or to higher GCS scores. This is appropriate when one considers that all data was extracted from patients enrolled in the Baylor Trauma Outcome Project (BTOP) and patients must be cognitively stable and able to understand and comprehend the study in order to be enrolled and complete the informed consent process. Generally speaking, patients with lower GCS scores at time of injury are more likely to have experienced a traumatic brain injury and may not be as cognitively capable of completing the informed consent process as patients who present with higher GCS scores at time of injury.

CHAPTER 3

INTERNSHIP EXPERIENCE

For my internship, I worked under the guidance and mentorship of Dr. Ann Marie Warren, a clinical psychologist specializing in trauma and rehabilitation at Baylor University Medical Center (BUMC). My primary focus was on the Baylor Trauma Outcome Project (BTOP), a study examining the health and psychological outcomes of patients after physical injury. I also worked on the Family Longitudinal Outcomes After Trauma Project (FLOAT), a similar study looking at the psychological outcomes of family members of trauma victims. The site of my internship was Baylor University Medical Center (BUMC) trauma department, a

Level I trauma center in downtown Dallas, Texas. My daily responsibilities included, but were not limited to: attending rounds, both on the general trauma floor and the surgical intensive care unit (ICU); making patient lists to determine which trauma patients are eligible to be seen for the day based on BTOP inclusion/exclusion criteria; seeing patients for enrollment; enrolling patients in BTOP; enrolling families in FLOAT; entering data; making follow up phone calls; and attending trauma conferences. I also helped to create and maintain regulatory binders for BTOP, FLOAT, and the Secondary Traumatic Stress (STS) study, a project examining the occurrence of secondary posttraumatic stress disorder in surgeons and other medical staff. I attended an Institutional Review Board (IRB) meeting, multiple clinical research coordinator (CRC) continuing education meetings held by Baylor Research Institute (BRI), and observed and/or participated in communication between our study and the Baylor Institutional Review Board (IRB).

I began each day at 9:00 am by making a list of trauma patients eligible to be approached for the Baylor Trauma Outcome Project (BTOP). We are given a list of all trauma patients on both the general floors and in the ICU. From this list, we remove the ineligible patients (e.g., those under the age of 18 years, patients admitted to the trauma service for less than 24 hours, patients unable to provide contact information, patients in police custody, patients unable to comprehend either English or Spanish, and patients with a traumatic brain injury and/or premorbid cognitive deficits). On Mondays and Thursdays, at 9:30 am, I went to general trauma floor rounds with one of the other clinical researchers. At these rounds, the physicians, nurses, therapists, social workers, and other medical staff, discuss the care and status of the trauma patients on the floor. I took notes as each patient was discussed by the medical staff, to gather information on whether or not the patient was ready, both mentally and physically, to be

approached for the study that day. On Tuesdays and Thursdays at 10:00 am, I attended ICU multi-disciplinary rounds, similar to floor rounds, on all trauma patients in the ICU. At these rounds, we took notes on the patients' conditions, so to be more familiar with the patient if/when we approached them on the floor for the study. We only approach patients for BTOP when they are on the floor, because they are usually sedated and not mentally stable enough to be approached in the ICU, per protocol. At this time, we also found families for the Family Longitudinal Outcomes After Trauma Project (FLOAT), as they were usually present at bedside when the trauma team rounded on their family member. On Tuesdays, at 11:30 am after rounds, Dr. Warren held a family support group for the families of the trauma patients. The other researchers and myself would walk through the ICU and ICU waiting room to inform family members of this group and see if anyone was interested. Also on Tuesdays, we attended Trauma Conference at 12:00 pm. At this conference, either one of the physicians or a drug or device representative, would give a presentation on a trauma-related topic for an hour over lunch. In the afternoons, after morning rounds, I would update and finish the patient list for the day and then myself and one of the other researchers, would split the list and see people for the study. Approaching patients for the study involved going room to room, based on the patient list, and telling patients about the study and asking if they would like to take part. If the patient said "yes," I would then go over the IRB-approved, informed consent form and read the measures with them. If the patient said "no," we would record that information and enter the patient into the "decline" section of our database. After I had seen patients for the afternoon, I typically made follow up phone calls. I would usually stay until 5:30 or 6:00 pm each day to make "night" calls. We allot 12 call attempts per patient (4 day, 4 night, and 4 weekend). *Night calls* include any time after 5 pm on weekdays and *weekend calls* comprise times between 5:00 pm on Fridays to

Sunday night. Between calls and seeing patients, I would also enter data into the database and help one of the other researchers enroll family members into the Family Longitudinal Outcomes After Trauma Project (FLOAT). I allotted various days as “thesis” days, in which I would work solely on my thesis and thesis database. On average, my time commitment to the project was approximately 40 hours a week.

Appendix A

Notice of Informed Consent

IRB Project Number: 012-028 Date 7/29/13

Baylor University Medical Center
Level I Trauma Center
Dallas, Texas

PARTICIPATION EXPLANATION AND CONSENT FORM

PROJECT TITLE: The Baylor Trauma Outcome Project

INVESTIGATORS: Ann Marie Warren, PhD, ABPP
Laura Bruce Petrey, MD
Michael L. Foreman, MD
Megan Self, MS
Grace Viere, BA
Evan Rainey

TELEPHONE NUMBER: (214) 820-4460

INTRODUCTION:

Before you say that you will be in this clinical trial (a kind of research study) you need to read this form. It is important for you to understand all the information in this form. This form will tell you what the clinical trial is about and how it will be done. It will tell you about some problems that might happen during the clinical trial. It will also tell you about the good things that might happen for you during the clinical trial. When you read a paper like this to learn about a clinical trial it is called "informed consent." The people who are doing this clinical trial are giving you very important information about the clinical trial. When you give your consent for something, it is the same as giving your permission. This consent form may contain words that you do not understand. Please talk with one of the doctors or their staff if you have questions. Do not sign this consent form unless all your questions have been answered and you feel comfortable with the information you have read. You will be given a copy of the form to keep.

You are being asked to take part in this study because you have been admitted to the Trauma Service at BUMC.

Why Is This Study Being Done?

The purpose of this study is to examine health related quality of life in the first year after a traumatic injury. It is important to understand how the injury may impact your emotional health, pain levels, behavioral choices, and return to participation in life after injury. For 40 people who agree to be in the study we will be examining if we can predict the development of psychological distress following a physical injury.

How Many People Will Take Part In The Study?
Approximately 2000 people will take part in this study at this location. Forty of these people will be asked to take part in an additional part of the study that involves providing a urine sample.

What Is Involved In The Study?

You will be asked to answer questions regarding your feelings about your injury, how you are doing physically after your injury, and how you have gotten back to your regular routines after leaving the hospital. While you are in the hospital, a member of the research team will ask you a series of questions that should take approximately 20 to 30 minutes. After you leave the hospital, you will be contacted by the research team at three months, six months and twelve months to answer the same series of questions. Each time you are contacted it should take approximately 20 to 30 minutes to answer all of the questions. For the 40 people asked to provide a urine sample this will be collected from you prior to leaving the hospital. The samples will then be coded and the study's principle investigator will have the code number attached to your name and will keep your identity confidential.

How Long Will I Be In The Study?

You will be in the study for the first year following your injury. You will be asked to complete the questionnaires before you leave the hospital and then at three months, six months and twelve months following your injury. If you are one of the 40 people who provide urine, you will also be in the study for the time necessary to collect the urine sample from you before you discharge from the hospital and you will also be in the study for the first year after the injury in order to complete the measures. Your urine sample will be used until it is gone, which could take several years. The analysis of the results of the urine study is likely to take up to a few years.
You can stop taking part in this study at any time. If you are one of the 40 people who provide a urine sample and want to have your sample removed from the study so that no additional research is done with it, contact the researcher and let him know that you wish to have it removed.

What Are The Risks of The Study?

There is minimal risk of emotional distress to you for taking part in this study from some of the questions being asked. There are no risks for providing a urine sample. Your alternative is not to take part in this study. There are no benefits to taking part in the study.

What About Confidentiality?

You have a right to privacy. This means that all the information about you from this study will only be shown to the people working on the study. The results of this study may be published in a scientific book or journal. If this is done, your name will not be used. All information about you from this research project will be kept in a locked office or other locked area. Information that is kept on computers will be kept safe from access by people who should not see it.
The privacy law requires that Baylor Research Institute get your permission before giving any of your health information to other people. There are people who need to review your information

to make sure the study is done correctly. These people may look at or copy your information while they are doing this review. When you sign this form you give permission to Baylor Research Institute to give other people information about your health as needed for the research project. These groups include people who work for Baylor Research Institute (including the Institutional Review Board), the US Food and Drug Administration, the Office for Human Research Protections and the Association for the Accreditation of Human Research Protection Programs. Even though we usually remove your name from the information, the people who get this information may be able to figure out who you are. The kinds of health information that might be given to these people include results from tests done on the urine. This information might also be notes written by your doctor from your medical record or notes written by your doctor asking for tests to be done on you.

You do not have to give this permission and it is all right to refuse to sign this form. Your doctor will still treat you and your insurance company will still pay your medical bills (according to their policy) even if you do not give your permission for us to release this information. However, since it is important for the people listed above to have access to your information, if you do not sign this form, you cannot be in the research study.

If you give permission to Baylor Research Institute to give other people information about your health and the other people are not part of the group that must obey this law, your health information will no longer be protected by the privacy law. However, we will take all reasonable measures to protect your information from being misused.

If you change your mind and later want to withdraw your permission, you may do so. You must notify Baylor Research Institute in writing at 3310 Live Oak, Suite 501, Dallas, TX 75204. If you decide to do this, it will not apply to information that was given before you withdrew your permission.

You may not be allowed to look at your health information during this study. However, at a later time, you will be able to look at this information. This later time will be sometime after the study is completed.

Unless permission is withdrawn, this permission will expire at the end of the research study.

What Are the Costs?

There are no additional costs to your participation in the study. For the 40 people who provide a urine sample you will not be required to pay money for any tests done on your urine.

Will I Be Paid For Taking part in This Study?

You will not be paid for participating in the study.

What are My Rights As a Participant?

Taking part in this study is voluntary. You may choose not to take part or may leave the study at

any time. If you agree to take part and then decide against it, you can withdraw for any reason. Deciding not to be in the study, or leaving the study early, will not result in any penalty or loss of benefits that you would otherwise receive.
We will tell you about any new information that may affect your health, welfare, or willingness to stay in this study.

All of the people working on the project must be careful not to carelessly harm you. If you are hurt during this project, you have the right to seek legal counsel. Nothing in this consent form takes away that right if you are hurt during this research.

Whom Do I Call If I have Questions or Problems?

If you have questions about the study or have a research-related injury, contact Ann Marie Warren, PhD at 214-820-4460

For concerns, complaints or questions about your rights as a research subject or if you simply wish to speak with someone who is not a part of the research staff, contact Lawrence R. Schiller, M.D., IRB Chair, at 214-820-2687.

Statement of Person Obtaining Consent:

I have explained to _____ the purpose of the research project, the procedures required and the possible risks and benefits to the best of my ability. They have been encouraged to ask questions related to taking part.

_____	_____	_____
Signature of Person Obtaining Consent	Date	Time

Confirmation of Consent by Research Subject:

You are making a decision about being in this research study. You will be asked to give your written consent if you want to be in the study. Giving consent is like giving permission. You should not give your permission to be in this study until you have read and understood all the pages in this form. If you cannot read, then someone can read the form to you. Make sure that all your questions about this research project have been answered before you sign this form. When you sign this form, you are giving your permission to be in the study. By signing this form, you have not given up any of your legal rights or released anyone from liability for negligence.

_____ has explained to me the purpose of the research project, the study procedures that I will have, and the possible risks and discomforts that may happen. I have read (or have been read) this consent form. I have been given a chance to ask questions about the research study and the procedures involved. I believe that I have enough information to make my decision. I have also been told my other options. To the best of my knowledge, I am not in any other medical research. Therefore, I agree to give my consent to take part as a subject in this research project.

_____	_____	_____
Signature of Subject	Date	Time

I understand that this individual is physically not able to sign the document. However, I have been present during the entire informed consent discussion and my signature indicates that the individual understands the information as presented and agrees to take part in the study.

_____	_____	_____
Signature of Witness	Date	Time

Appendix B

Connor-Davidson Resilience Scale (CD-RISC 10)

Connor-Davidson Resilience Scale 10
(CD-RISC 10)

initials ☐☐☐ *date* ☐☐/☐☐/☐☐ *visit* ☐☐ *age* ☐☐

marital status O married O separated O widowed O never married O divorced O refused

gender O male O female

race or ethnic origin O White, not Hispanic origin O black, not Hispanic origin O Hispanic
O Asian O Native American or Alaskan native O other O unsure

Please indicate how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.

---

	not true at all	rarely true	Sometimes true	Often true	True nearly all the time
1. I am able to adapt when changes occur.	O 0	O 1	O 2	O 3	O 4
2. I can deal with whatever comes my way.	O 0	O 1	O 2	O 3	O 4
3. I try to see the humorous side of things when I am faced with problems.	O 0	O 1	O 2	O 3	O 4
4. Having to cope with stress can make me stronger.	O 0	O 1	O 2	O 3	O 4
5. I tend to bounce back after illness, injury, or other hardships.	O 0	O 1	O 2	O 3	O 4
6. I believe I can achieve my goals, even if there are obstacles.	O 0	O 1	O 2	O 3	O 4
7. Under pressure, I stay focused and think clearly.	O 0	O 1	O 2	O 3	O 4
8. I am not easily discouraged by failure.	O 0	O 1	O 2	O 3	O 4
9. I think of myself as a strong person when dealing with life's challenges and difficulties.	O 0	O 1	O 2	O 3	O 4
10. I am able to handle unpleasant or painful feelings like sadness, fear and anger.	O 0	O 1	O 2	O 3	O 4

10/15/08

Appendix C

The Patient Health Questionnaire 8 (PHQ-8)

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✓" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3

Appendix D

Demographic Questionnaire

BTOP DEMOGRAPHIC DATA

Participant ID#: **Date Consented:** **Examiner Initials:**

DOB: _____ **DOI:** _____ **Age at injury:** _____

ORIENTATION

( ) **What is your name?** (If not answered correctly, stop session)
(2) **How old are you?**
(2) **Where are you right now?**
(2) **What city are you in?**
(1 /1/2) **What is the month? Day? Year?**
(1) **What day of the week is it?**
(1) **What do you think the time of day is (without looking at a clock)?**
_____ **TOTAL POINTS** (If score is 10 or above, continue interview

Gender:

0. **Female**
1. **Male**

What is your racial background?

1. **Caucasian/White**
2. **African American /Black**
3. **American Indian or Alaska Native**
4. **Asian**
5. **Native Hawaiian or Pacific Islander**
9.

Are you of Hispanic/Latino Origin?

0. **Not of Hispanic Origin**
1. **Hispanic Origin** (includes Mexican, Cuban, Puerto Rican, Latin American, Spanish)
9.

What is your marital status?

1. **Never married**
2. **Married**
3. **Divorced**
4. **Separated**
5. **Widowed**
6. **Other:**

_____

9.

What is the highest grade/degree you completed in school?

1. **8th Grade or Less**
2. **9th – 12th Grade**
3. **High School Diploma**
4. **Associate's Degree**
5. **Bachelor's Degree**
6. **Master's Degree**
7. **Doctoral Degree**
8. **Professional Degree**
9.

Are you currently working?

0. **No**
1. **Yes**

What is your job?

_____

What is your current household income in U.S. dollars (pre-injury)?

1. **< $25,000**

2. $25,000 - $49,000
3. $50,000 - $74,000
4. Above $75,000

Pre-Morbid Psychological Conditions

I am going to read a list of psychological conditions. Please tell me if you have been diagnosed with, or treated for, any of the following: (Responses can include yes, no, or unknown)

CONDITION:	NO / YES / UNKNOWN
a. Depression:	0 1 3
b. Bipolar Disorder or manic depression:	0 1 3
c. Panic Disorder:	0 1 3
d. Generalized anxiety disorder:	0 1 3
e. Posttraumatic stress disorder:	0 1 3
f. Obsessive compulsive disorder or OCD:	0 1 3
g. Any phobia *(if yes, which kind?)*:	0 1 3
h. Schizophrenia, schizoaffective disorder, or any psychotic disorder:	0 1 3

(if yes to psychotic d/o, what kind?) _____

i. Other: _____

CONTACT INFORMATION

Participant Phone #: _____ Email: _____

Address: _____

Alternate Contact # 1: _____

Relation: _____

Alternate Contact # 2: _____

Relation: _____

Glasgow Coma Scale at Admit (GSC): _____Health Insurance Status: none / public / private

ICD-9 & DRG Codes:

_____

Etiology of injury (ICD-9 Ecode):

_____

MCC:

_____

COMPLETION SCHEDULE OF MEASURES

Measure	Assessment

VR-12 Pre-Injury Health Status (BA)/Follow Up (3, 6, 12)	BA	3	6	12
PHQ-8	BA	3	6	12
CD-RISC	BA	-	-	-
PC-PTSD	BA	3	6	12
AUDIT-C	BA	3	6	12
Pain	BA	3	6	12
Return to Work	-	3	6	12

Appendix E

Daily Journal

CRM Daily Journal

I. Week 1:

Monday, June 03, 2013

9:00-9:30: Went over patient list with Kenleigh to determine which patients were eligible to be approached for the study.

9:30-10:30: Meeting with trauma staff for update on patients admitted over the weekend.

10:30-12:00: Read over study survey and set up accounts on laptop.

12:00-1:00: Lunch with Kenleigh, Megan, and two interns from Dr. Petrey's research.

1:00-5:30: Found articles related to the prevalence of PTSD, depression, anxiety, and ASD in patients after general surgery, orthopedic surgery, surgical education, biliopancreatic surgery, solid organ transplant, oncology surgery, ENT and OMFS, colorectal surgery, and/or vascular surgery.

Tuesday, June 04, 2013

9:30-10:00: Went over patient list to determine which patients were eligible to be approached for the study.

10:00-11:30: ICU Rounds

-Learned that alcohol (beer, whiskey) is given to patients who come in with alcohol dependence so they do not go through withdrawal symptoms.

11:30-1:00: Researched topics for thesis with Megan:

-ISS?
-Alcohol in relation to depression, pain, or justice?
-Does resiliency change over the year?
-Outcome expectancy and social provisions?
-Income and outlook on world?
-Prior TBI and outlook expectancy?
-Mild TBI and resiliency?

-Mild TBI and depression?

1:00-2:30: Committee Meeting, Tour of hospital with Dr. Gwirtz.
-Narrowed thesis to mild TBI and depression at Baseline
-IRB Meeting
-Proposal due in one month
-Email journal every week/two weeks to Claudia and Dr. Gwirtz

2:30-5:00: Found more articles for the literature review that I started on Monday.

Wednesday, June 05, 2013

9:00-10:00: Took BLN modules.

10:00-11:00: Made data sheets for the statisticians with Megan. Coded the mild TBI data. Looked at mild TBI data and depression, demographics, alcohol, and ISS. Used the Ohio State Univ. (v.12-10-08) Short form for the data.

11:00-12:00: Made patient list with Megan. Went through each patient's chart to determine if they were eligible to be approached for the study. Ruled out factors such as age, duration of stay, level of consciousness, and if they were going to jail. We also ruled out patients who Dr. Warren was seeing that day.

12:00-1:00: Ate lunch with Megan and Kenleigh.

1:00-2:00: Visited eligible patients with Kenleigh. Did not enroll any patients in the study. Most were either in too much pain or not conscious enough to complete the questionnaire.

2:00-3:00: Researched literature on mild TBI for thesis and for Dr. Warren. Found interesting literature on mild TBI's in the military, but very little on civilian populations. Found an interesting article on dementia and mild TBI and also a few that showed no link between mild TBI and alcohol abuse, post-trauma.

3:00-4:00: Visited eligible patients with Megan. Did not enroll any patients in the study. However, in both instances, (both with Megan and Kenleigh) I was able to see how they go about approaching the patients for the study.

4:00-4:30: Went to Parking Services to take care of badge and parking.

Thursday, June 06, 2013

9:30-10:00: Trauma rounds on 11th floor. Meeting with trauma staff to discuss any new patients from Monday.

10:00-12:00: ICU rounds in trauma ICU. Went bed to bed with trauma ICU staff to discuss each patient and status quo. (dx, current meds, nutrition, PT/OT, social issues, prognosis). Sarita was able to find families for the family study (FLOAT).

12:00-1:00: Lunch with Megan, Kenleigh, and Sarita.

1:00-2:00: Made patient list on my own. Ruled out ineligible patients for the study as well as patients that we had already approached or enrolled.

2:00-3:30: Visited eligible patients with Megan. Was able to find one patient to enroll. Watched Megan administer the questionnaire to the patient and then put together his folder for the study so we can contact him at 3, 6, and 12 mo.

3:30: Left early to go back to parking services to get my parking decal and badge.

Friday, June 07, 2013

9:30-11:00: Went room to room with Lily, one of the Baylor therapy dogs. We visited the 11th floor of Roberts, as well as the trauma ICU waiting room to visit families.

11:00-12:00: Made patient list for the day.

12:00-2:00: Lunch/Meeting with Kenleigh, Megan, Dr. Warren, Nakia (the trauma manager), Sarita, and Stephanie (a grad student volunteer).

2:00-4:30: Visited eligible patients for the study. Found one patient willing to take part and watched Megan go over the questionnaire with him and watched how she enrolls a patient. Called Guest Services to serve as a witness in the consent process due to the fact that the patient had casts on both arms and could not sign. Found two other patients who are willing to participate in the study, but were too tired or busy today. Will come back on Monday to enroll. Came back to the office and put together his folder.

II. Week 2:

Monday, June 10, 2013

9:30-10:30: Trauma Rounds on 11th floor. Saw new patient list and got a description from the trauma surgeons of all of the new patients admitted over the weekend. Dr. Warren is present for these meetings, so it is good to find out who she is seeing that day so we do not visit them for the study.

10:30-11:30: Made patient list for the day. Took a while because so many patients had been admitted over the weekend.

11:30-12:00: Practiced giving BTOP measures to Megan and Jessica. They pretended to be "difficult" patients.

12:00-12:30: Lunch with Megan, Kenleigh, and the girls working on Dr. Petrey's research.

12:30-1:30: Continued practicing the BTOP measures so that I could administer them by myself later in the afternoon.

1:30-3:00: Visited eligible patients with Megan. Enrolled one patient. She was a "difficult" patient, so I was able to see how Megan handles administering the measures. I saw first-hand what I had practiced earlier in the day, which was interesting.

3:00-4:00: Sorted papers/copies. Made booklets for the 3 and 6-month follow-up calls.

4:00-5:00: Administered my first BTOP measures to a patient. It went really well and Megan was there to help if I got stuck on anything. The patient seemed very intelligent and sociable, so the measures were easy to give.

Tuesday, June 11, 2013

9:30-10:00: Checked emails. Printed brief patient list for the ICU.

10:00-12:00: ICU rounds. Went bed-to-bed and listened to the trauma team discuss each patient. Watched one patient, with DNR orders, code while we were in the room. Also, watched one of the trauma surgeons talk to the wife of a separate patient about end-of-life wishes, which was also interesting. Rounds took a long time today because the ICU was so full.

12:00-1:00: Lunch and trauma meeting with residents and attendings. Listened to the attendings quiz the residents on what they would do in various situations. (For example, if a trauma patient came into the ED with a gunshot wound straight through the liver, or if it was late at night and the trauma nurse does not bring you the correct clamps and you are running out of time….etc).

1:00-2:00: Revised patient list to eliminate patients ineligible for the study and those that had been discharged since the morning.

2:00-4:30: Visited patients on the floor with Megan. Was not able to enroll any patients, but came close for two patients, so will probably revisit tomorrow when they are more alert and have more time. I think afternoons are a hard time to enroll patients because most are tired from having to do PT/OT in the morning.

4:30-5:30: Watched one of the volunteers, Jessica, input data into the database. Was present for Dr. Foreman, Dr. Warren, Megan, and Kenleigh's discussion on an abstract submission that was due later that night. Discussed the problem with using TBI and LOC (loss of consciousness) data from the trauma base list.

Wednesday, June 12, 2013

9:00-10:30: Made patient list for the day and checked emails.

10:30-12:00: Dr. Warren came down to the office and we discussed new thesis ideas because the data for the TBI measures was not as clear as we had originally thought. Decided to change my thesis to "change in resilience at baseline and 12 months." We also discussed how we could include other measures like depression, alcohol use, PTSD, and demographics to find correlations/relationships.

-Does resiliency change from time of injury and at 12 months?
-Is return to work correlated to resiliency?

-Are resilient people less likely to be depressed, develop PTSD, have issues with alcohol abuse?
- Is resiliency related to social support?

12:00-12:30: Lunch with Kenleigh and Megan.

12:30-3:00: Researched resiliency and trauma patients. Literature review. Found about 6 good articles. I will email Dr. Gwirtz at the end of the week with a final thesis idea and hopefully, a hypothesis.

3:00-5:00: Visited patients with Megan. I was able to administer the BTOP measures to another patient on my own today. It went really well, but took a long time because the patient had just eaten lunch and was tired.

Thursday, June 13, 2013

9:00-9:30: Checked emails. Skimmed new patient list.

9:30-10:00: Trauma rounds on 11th floor. Went over current patients on the floor to determine which ones were oriented enough to be seen for the study. There were not many patients to see for the day.

10:00-12:00: ICU rounds on 4th floor. Sarita was able to find a few families for the FLOAT study. Saw a number of new patients and ICU was not nearly as full as it had been earlier in the week, a good portion of them have moved to the 11th floor, so we will probably see them next week for BTOP.

12:00-1:30: Lunch for Dr. Warren's birthday.

1:30-3:00: Trauma Grand Rounds. Dr. Cook gave a lecture on his research in epidemiology and trauma. He hypothesized that the areas that trauma cases occur are related to areas of low socioeconomic status and/or areas with high alcoholic beverage sales. He did not find much of a relationship, but is going to refine his data and narrow his variables for his next paper. Overall, though, I thought it was a very interesting lecture.

3:00-4:00: Paperwork.

Friday, June 14, 2013

Research/Thesis/Literature Day.

III. Week 3:

Monday, June 17, 2013

9:00-9:30: Checked emails.

9:30-10:30: Trauma rounds on 11th floor. Saw list and got an update on the patients admitted over the weekend and those that transferred from ICU to the floor.

10:30-12:00: Made patient list for the day. Lots of transfers from ICU to the floor.

12:00-1:00: Lunch.

1:00-2:30: Saw patients with Kenleigh. Was not able to enroll any patients, but three of them seemed interested, so we will see them again tomorrow.

2:30-5:00: Data entry.

Tuesday, June 18, 2013

9:00-10:00: Checked emails. Printed off quick patient list that we could all use during ICU rounds.

10:00-11:30: ICU rounds. Lots of new patients.

11:30-12:00: Revised patient list to exclude patients that are less that 18, going to jail, or not oriented enough to be approached for the study.

12:00-1:00: Trauma lunch meeting. Sales rep came and did a presentation on a skin graft device that uses progenitor stem cells.

1:00-2:00: Meeting with website designers to come up with ideas for the internal and external trauma websites.

2:00-3:00: Meeting/Conference on Good Clinical Practice. Presenter was Todd Almarez from Medtrials. He was also one of our professors at UNTHSC, so I talked to him a bit afterwards. Two of the other interns from the CRM program were also there. I kept a copy of his PowerPoint slides to use as a reference.

3:00-5:00: Finished patient list. Went up to the floor with Megan to approach patients. One was very interested, so we will see him again tomorrow to administer the measures. It was late in the day, so most patients were asleep.

5:00-5:45: Finished paperwork and caught up on day's events, then went home.

Wednesday, June 19, 2013

9:00-10:30: Checked emails. Made patient list for the day. Listened to Megan make follow-up phone calls.

10:30-12:00: Visited patient floor. Checked on eligible patients. Most were asleep. We figured it was because they had all just received their pain medication. Did not enroll anyone for the day.

12:00-1:00: Lunch.

1:00-5:00: Meeting with Dr. Warren, Megan, and Kenleigh. Discussed thesis. Listened to Megan make follow-up phone calls.

Thursday, June 20, 2013

9:00-9:30: Checked emails. Made quick patient list for rounds.

9:30-10:00: Trauma rounds on 11th floor. Update on patients.

10:00-11:00: ICU rounds. Update on patients.

11:00-12:00: Refined patient list to eliminate ineligible patients.

12:00-1:00: Lunch.

1:00-4:00: Visited patients. Enrolled one patient. He was a paraplegic, so it was interesting to see his answers to a lot of the questions, especially the "Justice" and "Outlook" questionnaires.

4:00-4:30: Caught up with Sarita and the day's events, then went home.

Friday, June 21, 2013

9:00-9:30: Made quick patient list. Meeting with Claudia Mattil. Found out that our department is changing managers, so I will need to report to someone new. I will investigate this further next week, because Dr. Warren was not in the office today.

9:30-12:00: Therapy dog came today. We took her to the 11th floor to see all of the trauma patients. Her name was Lily and she was absolutely adorable and amazing with the patients. It was so encouraging to see how happy the patients became when Lily came in the room.

12:00-1:00: Lunch at cancer hospital across the street.

1:00-2:30: Refined patient list to exclude ineligible patients and those that had discharged since the time I made it this morning. Picked scenario/fake patient for the intern-training course (ATLS) next week. I am going to be a 25 yr old that jumped from a building.

2:30-4:30: Saw patients on the floor. I was able to enroll another patient on my own today. Megan did the consent and then I took over with the questions.

4:30: Went home a little early.

IV. Week 4:

Monday, June 24, 2013

9:00-9:30: Checked emails. Looked at quick patient list to see who had discharged and who was still here.

9:30-10:30: Trauma rounds on 11th floor.

10:30-12:30: Made patient list. Tons of new patients from the weekend. List was close to seventy.

12:30-1:00: Lunch.

1:00-3:00: Saw patients with Megan on 11th floor. Enrolled one patient and will come back tomorrow to get another one who was too tired today.

3:00-5:00: Interview with new volunteer.

Tuesday, June 25, 2013

9:00-12:00: No ICU rounds today. Made patient list and had enough time to go through the charts of all of the ICU patients for Sarita and the FLOAT study. Typically, I only have enough time to go through the charts of the patients on the floor. It was a sad morning because one of the patients, who had been there since I first started, was taken off life support and passed away.

12:00-1:00: Lunch.

1:00-3:00: Moulage. Dressed up as fake trauma patients for the ATLS course (Advanced Trauma Life Support) given to the new surgical interns. We had fake blood and wounds. We also used real equipment, such as leg braces, C-collars, and breathing masks.

3:00-7:00: ATLS course. I was a 25 year-old female who jumped from a third story building. I had a broken femur and many broken ribs. I remained unresponsive throughout the entire scenario, indicative of a brain injury. The surgical interns each came by and assessed my trauma as part of their coursework and received a pass/fail grade at the end of it. It was very interesting to see how each of the interns handled the scenario/patient.

Wednesday, June 26, 2013

9:30-10:30: Checked emails. Made patient list.

10:30-11:00: Went to surgical intern orientation to watch Dr. Warren give a presentation on trauma psychology.

11:00-1:00: Lunch and finished making patient list and going through charts.

1:00-4:30: Megan, Kenleigh and I split the patient list up and visited patients. We were each able to enroll a patient. Megan still did the informed consent for my patient, but then I did the rest myself while she enrolled another patient. I was able to obtain a urine sample from my patient, so I spent a good deal of time carrying it across campus to the lab.

Thursday, June 27, 2013

9:00-9:30: Checked emails and patient list for the day.

9:30-10:00: Trauma rounds on 11th floor.

10:00-11:00: ICU rounds.

11:00-1:00: Made patient list for the day and lunch.

1:00-2:30: Visited a patient with Megan to enroll her in the study. We ended up talking to her for an hour and a half about her life. We did not enroll her because she had friends coming at 3, but

hopefully we will be able to come back tomorrow morning. She seemed interested when we told her about BTOP.

2:30-4:00: Visited another patient with Megan. He ended up being the girlfriend of a patient that we had already enrolled in the study and who was due for a follow-up. Megan enrolled the boyfriend, while Kenleigh was able to follow-up with the girlfriend already enrolled. It was very hectic, but we ended up getting both patients and a urine sample.

4:00: Took urine sample to the lab and then went home.

Friday, June 28, 2013

9:00-9:30: Checked emails. Printed patient list for 11th floor.

9:30-11:00: Therapy dogs came today. This time we had two leonbergers. They are huge dogs that weigh close to 160 lbs, but they were perfect for the patients because they could sit in the chairs right next to the patient beds, while the patients pet them. They were also tall enough for the patients to reach when they just sat next to the beds.

11:00-1:00: Input data into the database. Lunch.

1:00: The staff went home early because they were over hours, so I went home too and did a little research. Found out that we have a meeting with the new research coordinator, the replacement for Claudia Mattil on Tuesday, so hopefully I will find out more at that time.

V. Week 5:

Monday, July 01, 2013

9:00-9:30: Checked emails. Made quick patient list.

9:30-10:30: Trauma rounds on 11th floor.

10:30-12:00: Finished patient list. Excluded patients ineligible to be approached. The patient list was dramatically shorter than it was last week.

12:00-1:00: Lunch.

1:00-2:00: Visited patients on 11th floor. We had two student volunteers come to help us today, so we brought them to the floor with us and showed them how to enter patient rooms and ask if they needed anything. We did not find anyone for the study. One person seemed interested, so we will come back tomorrow if he has not discharged.

2:00-4:00: Entered data into the database.

Tuesday, July 02, 2013

9:00-9:30: Checked emails. Made quick patient list.

9:30-10:00: Meeting with Claudia Mattil and Jennifer Thomas to discuss transition.

10:00-11:30: ICU rounds. It was a crazy/hectic morning. One patient tried to fight his way out of bed. Sarita found a family for the family support group.

11:30-12:00: Checked the chart of a patient in the ICU for Sarita, so she would know how to talk to the family before the support group. It is always good to know background of the patient before you meet with their family, so you do not say anything insensitive or bring up any information about the patient that the family might not be aware of yet.

12:00-1:00: Trauma conference lunch. There were no vendors or sales reps today.

1:00-2:30: Finished patient list. List was still short and there were not many eligible patients. Also entered data.

2:30-4:00: Visited patients on 11th floor. We split the list with Kenleigh and Grace. They saw the patients on Truett and we took the patients on Roberts. We were able to enroll one patient with a pelvic fracture. It took longer than usual because we sat and talked to her for a while about her life, she was a PhD and was very interested in our research.

Wednesday, July 03, 2013

9:00-10:30: Made patient list. Also made patient list for Sarita and the ICU patients.

10:30-12:00: Input data into the database.

12:00-1:00: Lunch.

1:00-2:30: Continued to input data.

2:30-4:00: Rounds with Megan. We were not able to enroll anyone today. Most were either too tired or wanted time to think about it.

Thursday, July 04, 2013

HOLIDAY

Friday, July 05, 2013

HOLIDAY

VI. Week 6:

Monday, July 08, 2013

9:00-9:30: Checked emails. Made quick patient list.

9:30-11:00: Trauma rounds on 11th floor. Lots of new patients admitted over the holiday weekend.

11:00-1:00: Made patient list.

1:00-1:30: Lunch.

1:30-2:30: Saw patients with Megan on 6-Truett, the ortho floor. We did not enroll any patients, though.

2:30-3:00: Tried to input data, but server was down, so I organized TBI binders for the families of TBI patients.

3:00-4:30: Saw more patients with Megan, but this time on the 16th floor of Roberts.

Tuesday, July 09, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-11:00: ICU rounds. ICU was pretty empty today, only 2 new patients overnight. There is a new quadriplegic patient in the unit, who injured his spine at C4 while diving into a shallow lake.

11:00-12:00: Revised patient list to exclude ineligible patients. (under 18, going to jail, less than 24 hours) Lots of "rule-outs" so far this week. We have 4 patients on the 11th floor going to jail.

12:00-1:00: Trauma conference/lunch. This week, the conference was on compartment syndrome. Brushed up on lower limb anatomy.

1:00-1:30: New volunteer came, so I showed him around the 11th floor and how to go into patient rooms to see if they needed anything.

1:30-3:00: Went back to office and entered data.

3:00-3:30: Saw patients with Megan. The man we saw yesterday, who said he was interested in participating, but had visitors today, so hopefully we will be able to get him tomorrow.

3:30-5:00: Made trauma database, so we can start getting emails when current enrollees are back at the hospital. This way, we can catch them in person if they are ready for a follow up.

Wednesday, July 10, 2013

Research/Thesis Day. I finished everything except the background section of my thesis proposal. Hopefully, I will get that done later this week. I already have the literature pulled, I just need to summarize it all.

Thursday, July 11, 2013

9:00-9:30: Checked emails. Made quick patient list for rounds.

9:30-10:00: Rounds on 11th floor. Only two new patients on the list today.

10:00-11:00: ICU rounds. One of the patients had drug-resistance bacteria growing, so we had to do rounds in the hallway.

11:00-12:00: Revised patient list, excluding ineligible patients.

12:00-2:00: IRB meeting with David and Toke, two of my classmates from the program.

2:00-3:00: Trauma Grand Rounds. Dr. Petrey presented on "Damage Control Resuscitation." It was very interesting and had lots of pictures of patients from the OR with organs outside of the body cavity. Her presentation discussed the best ways to treat and stabilize these patients, so they can pack and cover them for surgery the next day.

3:00-5:00: Entered data.

Friday, July 12, 2013

9:00-9:30: Checked emails.

9:30-11:00: Therapy dog came today. Today's dog was a golden retriever named Cody. He was great with the patients on the 11th floor and then went to the ICU waiting room to visit the families there. Next week, they will try to bring one of the dogs into the ICU to visit one of the patients with a high, C4-C7, spinal cord injury.

11:00-12:30: Worked on thesis.

12:30-1:00: Lunch.

1:00-4:30: Entered patient data.

VII. Week 7:

Monday, July 15, 2013

9:00-9:30: Checked emails.

9:30-10:30: Trauma rounds on 11th floor.

10:30-11:00: Watched Megan submit a "serious adverse event" form because one of our patients, enrolled in the study, died over the weekend.

11:00-12:00: Worked on thesis.

12:00-1:00: Break for lunch.

1:00-2:00: Worked on thesis.

2:00-3:00: Took the Baylor volunteers on a tour of the ICU and told them how the trauma unit works. Also talked to them about our research and answered their questions.

3:00-5:00: Finally finished background information of thesis proposal. It was extremely hard to condense all of the background literature into a few paragraphs and it took much longer than I expected. Tomorrow I will edit it and then send it to Dr. Warren for her to look over and edit.

Tuesday, July 16, 2013

9:00-10:00: Checked emails. Worked on thesis.

10:00-10:30: ICU rounds. We had a meeting at 10:30, so we had to leave rounds early.

10:30-11:30: Research meeting with Dr. Warren, Dr. Foreman, Dr. Petrey, and research team. We discussed all of the research papers that we are currently working on, as well as ideas for future papers.

11:30-4:30: Finished editing thesis. Input remaining patients into database, so that we can get emails every time one of our patients enters one of the Baylor hospitals or clinics. This way we can track our patients for follow-ups and/or adverse events.

Wednesday, July 17, 2013

9:00-10:30: Filled out committee form and degree plan forms for Jennifer, as well as emailed her my journal from the last two weeks for her to sign.

10:30-12:30: Dr. Warren came by to look at my thesis proposal. She came up with some new ideas, so I will need to change a good portion of it. I think these changes are really good and I am glad that I was able to do the thesis proposal first, so I could learn how to make one on my own, as this is my first one to write.

12:30-4:00: Worked on thesis changes.

Thursday, July 18, 2013

9:00-9:30: Checked emails.

9:30-10:00: Trauma rounds on 11th floor of Roberts.

10:00-11:30: ICU rounds. Lots of patients in critical condition from this morning. ICU waiting room is packed with family members and friends.

11:30-12:30: Worked on thesis. Looked up "bandemia" because I constantly hear it in the ICU, but am never sure what it means. Also, looked up how the ISS (injury severity score) is calculated.

12:30-2:00: Finished thesis proposal.

2:00-2:30: Saw patients with Megan. We split the list with Kenleigh and Grace, so we only saw the patients on Truett. We were not able to enroll anyone today.

2:30-3:30: Made copies of the 12-month follow-up packets.

3:30-5:00: Town Hall Meeting.

Friday, July 19, 2013

9:00-9:30: Checked emails.

9:30-11:00: Therapy dog came. Today's dog's name was Jinx and is the dog of one of the ICU respiratory therapists. We went to the 11th floor, the ICU waiting room, and then we were able to go into the ICU to visit two of the patients there. Jinx was able to sit on the bed of a severe TBI patient and it was amazing to watch the patient wake up to pet Jinx. Jinx was also able to sit next to the bed of a quadriplegic patient who smiled when he saw her. It was an absolutely incredible experience and I am so glad that I was able to watch it happen.

11:00-12:00: Entered the "adverse event" into the database, as well as the regulatory binder.

12:00-1:00: Lunch

1:00-2:00: Entered data.

2:00-4:00: Saw patients with Kenleigh. We were able to partially enroll a patient. Kenleigh did the consent form and then I took over from there. He needed to take a long phone call in the middle of the questionnaires, so I will come back on Monday to finish.

VIII: Week 8:

Monday, July 22, 2013

9:00-9:30: Checked emails.

9:30-10:30: Trauma rounds on 11th floor.

10:30-11:00: Visited the patient that I started to enroll on Friday, but he was sleeping.

11:00-12:30: Worked on patient list.

12:30-1:00: Lunch.

1:00-3:00: Visited patients with Megan. The patient that was sleeping this morning was about to go to a procedure, so I will try again tomorrow. I was able to enroll a patient right before she discharged though.

3:00-5:00: Helped Sarita make the regulatory binder for the FLOAT study. Dr. Warren emailed me some revisions to my thesis proposal, so I will bring my laptop to work tomorrow and work on those.

Tuesday, July 23, 2013

9:00-10:00: Checked emails. Started to work on thesis revisions.

10:00-10:15: Visited the patient from yesterday to see if we could finish the questionnaires. He was in the middle of physical therapy, so I will try to come back later in the day.

10:15-11:00: ICU rounds. Dr. Cook was the attending in the ICU today. He spent a lot of time explaining the medical terms to the patient families, which I thought was really great. It also cleared some things up with me too, since I still get confused by some of the terms myself.

11:00-11:45: Visited the patient from this morning. Was finally able to finish enrolling him.

11:45-12:30: Made new-patient folder for the gentleman that I just enrolled. Also, worked on the thesis revisions that Dr. Warren sent me.

12:30-2:00: Meeting with Jennifer Thomas.

2:00-3:00: Practiced the measures with Grace so she can start giving them herself.

3:00-5:00: Helped Sarita make regulatory binder for FLOAT.

Wednesday, July 24, 2013

9:00-12:30: Worked on Thesis Proposal and sent it to Dr. Warren for another revision.

12:30-1:00: Lunch.

1:00-4:00: Finished making regulatory binder with Sarita for FLOAT and started to make the one for the cardiovascular study (CV study) as well.

Thursday, July 25, 2013

9:00-9:30: Checked emails.

9:30-10:00: Trauma rounds on 11th floor.

10:00-11:00: ICU rounds on 4N. We did not see any new patients. The severe head injury from last week, the one who saw the therapy dog, has been transferred to the floor and is doing very well. Yesterday he was doing crossword puzzles and walking the halls.

11:00-12:00: Worked on regulatory binder for the Cardiovascular study that Sarita is starting up with the Plano heart hospital.

12:00-1:00: Lunch.

1:00-3:00: Lit Review.

3:00-5:00: Saw patients. I was able to enroll one patient and Megan was able to enroll another. We now have over 350 patients enrolled in BTOP.

Friday, July 26, 2013

9:00-9:30: Checked emails.

9:30-11:00: Therapy dog came today. Today's dog was named Dolly and went room to room in a pink stroller…..it was quite the picture. Dolly was able to see the TBI patient that Jinx, the other therapy dog, saw in the ICU last Friday. He is doing much, much better.

11:00-12:30: Worked on making the research bulletin board to go outside the ICU on 4N.

12:30-1:00: Lunch.

1:00-3:30: Finished working on the bulletin board.

3:30-5:00: Research Meeting.

IX. Week 9:

Monday, July 29, 2013

9:00-9:30: Checked emails.

9:30-12:00: Made copies of Float packets for Sarita and organized files.

12:00-5:00: Helped Sarita with the Geo-Code study.

Tuesday, July 30, 2013

10:00-10:30: Took down fliers per marketing instructions. ICU rounds were cancelled this morning.

10:30-11:00: Helped Sartita look at ICU patient charts to determine if there were any families eligible for FLOAT. One of the patients has an internal decapitation, where his spinal cord is detached from his brainstem. Extremely sad, but interesting case.

11:00-12:00: Helped organize/fix problems in BTOP database. Some of the data had not been entered correctly, so I went through manually and fixed the issues.

12:00-1:00: Trauma conference. Pharmacy gave a lecture today.

1:00-4:00: Continued to fix database. Very time consuming. Also entered a few patient charts.

4:00-4:30: Made "Table of Contents" for FLOAT regulatory binder.

4:30-5:45: Started to make database for my thesis data.

Wednesday, July 31, 2013

9:00-9:30: Checked emails.

9:30-10:30: Helped move Sarita into a new office. Finished making database to send to Louanna so she could pull the ICD-9 codes from each BTOP patient.

10:30-1:00: Went over to Dr. Warren's office with Sarita so I could help her organize all of the Geo code files.

1:00-2:00: Meeting with Jennifer.

2:00-5:30: Made "Informed Consent: Note to file" for both the FLOAT and BTOP regulatory binders so it would be documented that we were trained properly before giving informed consent

to patients. Also, made Training Protocol for the FLOAT binder. Looked up ICU patients for Sarita.

Thursday, August 1, 2013

9:00-10:00: Checked emails. Made FLOAT list for Sarita for ICU rounds at 10.

10:00-11:00: ICU rounds.

11:00-4:00: Cleaned up database for thesis. Louanna sent back all of the ICD-9 codes, but I have to go through manually and enter what each code means. We emailed her back to ask for the code descriptions, but have not heard anything back yet. Searched the ICU waiting room with Sarita looking for family members for the FLOAT study. I am not able to approach the families because I am not officially on the study, but I am able to help her identify the families for her to approach. Also entered data into the BTOP database.

Friday, August 2, 2013

Thesis/Research Day

X. Week 10:

Monday, August 5, 2013

9:00-9:30: Checked emails.

9:30-12:30: Went over to Barnett so Jennifer could sign my thesis proposal. Will have Dr. Warren sign it tomorrow so I can turn it into Dr. Gwirtz on Wednesday morning. Worked on thesis database. Talked with Stephanie about different statistical models that we could use.

12:30-4:40: Lunch. Made follow-up phone calls. Did lit review to see if there was any new data out there on ISS and ICD-9 codes and resilience. Helped Sarita try to find FLOAT families.

Tuesday, August 6, 2013

9:00-10:00: Checked emails. Helped Sarita make patient list for ICU rounds/FLOAT.

10:00-11:30: ICU rounds.

11:30-12:00: Talked to Dr. Warren. She signed my proposal forms so I will bring them to Dr. Gwirtz's office tomorrow morning before I leave for Dallas/Baylor.

12:00-12:30: Trauma conference. No presentation today, just lunch.

12:30-5:00: Made patient list for BTOP. Made copies for Sarita and CV study. Dr. Warren came back to our office around 3:00, so we talked a little more about my thesis and about abstracts.

5:00-6:00: Visited a patient with Megan. He told her yesterday that he would do the study today, but when we came by his room, he was too tired. We told him we would come back tomorrow.

Wednesday, August 7, 2013

8:30: Gave all of the forms to Dr. Gwirtz this morning before coming to work.

9:00-10:00: Checked emails. Made patient list.

10:00-12:30:Practiced measures with Grace and Megan again so Grace could become more comfortable with them.

12:30-1:00: Lunch.

1:00-4:00: Helped Sarita make FLOAT list and find families. Made templates for FLOAT and CV data boxes. Helped Sarita make folders and file cabinets for both studies.

4:00-6:00: Saw patients with Megan. One of our patients told us to come back on Friday; he is excited about the therapy dogs coming. Was able to enroll another patient who was injured from doing Motorcross.

Thursday, August 8, 2013

9:00-10:00: Checked emails. Made ICU FLOAT list for ICU rounds.

10:00-11:30: ICU rounds.

11:30-2:00: Finished making ICU list for Sarita. Lunch with Sarita while Grace and Megan saw patients on the floor. Input data into database. Finished the chart for the patient that I enrolled yesterday afternoon.

2:00-4:30: Looked for families with Sarita for FLOAT. I wasn't feeling good today, so I thought it was best not to go see patients, so I spent the rest of the day entering data and doing busy work.

Friday, August 9, 2013

8:00-11:00: New employee orientation at BRI. OSHA training.

11:00-12:00: Made ICU patient list for Sarita.

12:00-1:00: Lunch.

1:00-4:00: Finished patient list. Megan and Grace saw patients on the floor. I stayed and entered data.

XI. Week 11:

Monday, August 12, 2013

9:00-9:30: Checked emails. Printed off patient list for rounds.

9:30-10:30: Rounds on floor. Lots of new patients this week. Lots of ICU patients.

10:30-12:00: Made patient list for both BTOP and FLOAT. Lots of rule-outs for BTOP. There are a ton of families in the ICU waiting room, hopefully tomorrow after ICU rounds, we will be able to identify which patients they belong to.

12:00-1:00: Lunch.

1:00-3:00: Nakia found a new bookcase for Sarita's new office, so we moved it in and set everything up. Had to redo the file cabinets that I made last week.

3:00-4:00: Helped Sarita find families in the ICU waiting room for FLOAT. We were able to find a few, but they said today was not a good day. Hopefully tomorrow, after ICU rounds and then the family support group, we will be able to find more. The ICU waiting room was packed this afternoon, and a lot of the families were upset about the conditions and not in the mood to talk about our study.

4:00-5:30: Made follow-up phone calls.

Tuesday, August 13, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-12:30: ICU rounds. Rounds took a very long time today. Lots of new patients. Also, had a lot of emergencies while we were having rounds. We were able to find two families for the family support group at 11:30.

12:30-2:00: Trauma conference.

2:00-3:30: Made patient list for the floor.

3:30-5:30: Made follow-up phone calls.

Wednesday, August 14, 2013

9:00-11:00: Checked emails. Made a trauma research fact sheet for Nakia's presentation later in the day. Put together all of the statistics and publications from our three major studies: BTOP, FLOAT, and STS (secondary traumatic stress in clinicians).

11:00-12:00: Two new student volunteers from UNT Denton came today. We interviewed them and then showed them around the hospital.

12:00-1:30: Meeting with Dr. Warren about current publications and about what we want to do for my abstract and what conferences we want to send it to. Also, decided to officially put me on the FLOAT study to help Sarita out, so now I can officially give measures as well.

1:30-2:00: Lunch.

2:00-4:30: Practiced FLOAT measures with Sarita. Helped her find families in the ICU. We were able to get the wife of one of the patients with a SCI for the study. Made follow-up phone calls.

Thursday, August 15, 2013

9:00-10:00: Checked emails. Made ICU list for rounds.

10:00-12:30: ICU rounds. There were not as many families there today as there were on Tuesday. They were withdrawing care on one of the patients who's sister we approached for the study on Tuesday. They also moved two other potential patients to the floor yesterday. However, we think we have three potential family members for the afternoon.

12:30-1:00: Lunch.

1:00-2:00: Went over measures with Sarita again. We also practiced consenting. The measures and consent form are almost identical to BTOP, so it will not be much of an adjustment.

2:00-2:30: Went through the ICU waiting room with Sarita to find the three family members that we had talked to earlier. We were only able to find one of them, and he was trying to take a nap, so it was not a good time.

2:30-4:00: Went back to the office to make a quick follow-up call. He had asked to be called back on Thursday, because the plate for his dentures was going to be back in and he could talk. The call lasted longer than I expected, so I missed Sarita enroll one of the patient family members that I mentioned earlier. Hopefully, the other two family members will be there tomorrow so I can observe her give the measures.

Friday, August 16, 2013

9:00-10:00: Checked emails. Made patient list for the ICU and FLOAT.

10:00-11:00: I sat in the ICU waiting room today with my laptop and worked on my thesis database. We decided that I am going to start doing thesis work in the waiting room a couple hours a week, so that hopefully patient families will become familiar with me and the grey scrubs and it will be easier for us to approach them for the FLOAT study.

11:00-12:00: Walked around the ICU with Sarita. Entered data into the database. Talked to Dr. Warren briefly about FLOAT and thesis work.

12:00-1:00: Lunch.

2:00-3:00: Watched Sarita enroll a patient for FLOAT. It went extremely well and I am very excited to be able to enroll patients on my own now. I was added to the consent form today, so now all Sarita has to do is watch me do a consent on my own and then I can hopefully start enrolling family members.

3:30-4:00: Helped Grace with her Lit Review.

4:00-4:30: Made follow-up phone calls. No one answered, so I left voicemails.

4:30-6:00: Enrolled two patients for BTOP on my own this afternoon. The first was a young man about my age and it went very quickly. The second patient was an older man who questioned all of the measures. It took about an hour to enroll him. I did not have time to make patient folders when I got back to the office because it was so late, so I will make them first thing on Monday morning.

XII. Week 12:

Monday, August 19, 2013

9:00-10:00: Made folders for the two patients that I enrolled on Friday.

10:00-12:00: Made FLOAT list for Sarita. We decided to change the FLOAT protocol to include all of the ICU patient families instead of just the trauma patient families, as it is now. I also helped Sarita change the current protocol to reflect the changes.

12:00-12:30: Lunch.

12:30-5:00: Entered patient data. There was a lot to enter because Megan, Sarita, and one of the volunteers stayed late on Friday to make calls.

5:00-6:00: Made an ICU waiting room map so that we can start keeping track of who the families are and where they are sitting to make ICU rounds and FLOAT much easier.

Tuesday, August 20, 2013

8:30-9:30: Got to work early today so that I could do a follow-up call. He requested to be called back this morning.

9:30-10:00: Made quick ICU list for rounds. Went through the waiting room with Megan to make a map of all of the ICU families so that we could grab them before we rounded on their family member. We figured it would be better if we went to find the family members before rounds, that way they would be familiar with us and more comfortable when we approach them for FLOAT.

10:00-12:00: ICU rounds.

12:00-1:00: Trauma conference. Dr. Rabbler gave a presentation about central line placement.

1:00-3:00: Entered data for FLOAT.

3:00-5:00: Did a literature review for the case study that they want to do on one of our patients that repeatedly comes in for self-inflicted stab wounds.

Wednesday, August 21, 2013

9:00-10:00: Made ICU list for FLOAT.

10:00-12:00: Sat in the ICU waiting room and worked on thesis database and lit review for Sarita and case review.

12:00-12:30: Lunch.

12:30-2:00: Entered FLOAT data.

2:00-3:30: Group meeting with Dr. Warren.

3:30-4:30: Finished entering data for FLOAT. Worked on abstract with Megan.

Thursday, August 22, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds. Pulled charts for day follow-up calls.

10:00-11:30: ICU rounds. It's a bad week for FLOAT. There are not many families and the few that are here are for patients that are moving up to the floor soon, so we cannot enroll them.

11:30-12:00: Listened to Grace make follow-ups calls, so she can be cleared to start doing them on her own.

12:00-12:30: Lunch.

12:30-3:00: Made timeline with Sarita of the case report patient. He is a patient enrolled in BTOP who repeatedly stabs himself in the abdomen without suicidal intention. We wanted to map out all of his admission dates, mechanism of injury, location of injury, and outcome for the case report.

3:00-4:00: Entered FLOAT data. Found one of the patient families that we have been trying to find for a few weeks now. Gave them the FLOAT fliers. They said they will be back tomorrow at the same time, so hopefully we can enroll them in FLOAT at that time.

4:00-4:30: Made copies of FLOAT fliers, Support Group fliers, and baseline measures for BTOP.

Friday, August 23, 2013

9:00-10:00: Made FLOAT list.

10:00-11:00: Watched Grace make a follow-up phone call so she could be cleared to do it on her own.

11:00-12:00: Entered data.

12:00-1:00: Lunch.

1:00-3:00: Went to the floor to consent patients. I got two "maybes", so I will come back later in the afternoon to check again.

3:00-3:30: Went to the ICU waiting room to find the family that I spoke to yesterday. They were there today, but they said to wait until Monday.

3:30-4:00: Went back to the floor to check on the two patients that were thinking about BTOP. Both said to wait until Monday.

4:00-6:00: Made follow-up phone calls for nights and weekends.

XIII. Week 13:

Monday, August 26, 2013

9:00-10:00: Made FLOAT patient list for ICU.

10:00-10:30: Went up to the floor to try to consent the two patients that I saw last Friday. One had discharged and the other declined.

10:30-12:00: Finished patient list. Made a follow-up phone call. Entered data for BTOP.

12:00-1:00: One of the BTOP patients called our office because she had received a reminder postcard, so we completed her 3mo follow-up at that time.

1:00-1:30: Lunch.

1:30-2:00: Sat in the ICU waiting room and worked on a lit review for one of the studies that we are doing with the Emergency Department. While I was there, I saw the wife of one of the patients that we had talked to last Friday.

2:00-3:00: Enrolled the wife. I am now signed off on all consent forms and can start enrolling patients for both BTOP and FLOAT on my own.

3:00-4:00: Entered FLOAT data. Worked on lit review from earlier.

4:00-5:00: Worked on STS regulatory binder.

5:00-5:30: Made follow-up phone calls.

Tuesday, August 27, 2013

9:30-10:00: Made ICU list for rounds. Went to ICU waiting room to make a map of where the families were sitting.

10:00-11:15: ICU rounds.

11:15-11:30: Went to ICU waiting room to try to find families for Support Group. None of the families that we approached showed interest.

11:30-11:45: Sat in the conference room and waited for families to come to group. One family member of a non-trauma patient came after she had seen the fliers in the waiting room.

11:45-12:30: Trauma Conference.

12:30-3:00: Made regulatory binder for STS and CV studies.

3:00-4:00: Went to the floor to enroll BTOP patients. Was able to consent one and Grace completed the measures.

4:00-5:30: Helped Dr. Warren move offices. Made follow-up night calls.

Wednesday, August 28, 2013

9:00-11:00: Made ICU patient list. Made copies of baseline and 6 month BTOP measures.

11:00-12:00: Went to the floor to enroll patients.

12:00-12:30: Lunch.

12:30-4:00: Worked on thesis manuscript.

Thursday, August 29, 2013

Thesis/Manuscipt day from home. Finished the introduction and methods sections of my manuscript.

Friday, August 30, 2013

9:00-10:00: Checked emails. Made patient list.

10:00-11:00: Entered FLOAT data.

11:00-12:00: Entered BTOP data.

12:00-12:30: Lunch.

12:30-3:00: Went to the floor with Grace to approach patients for BTOP. We were able to get two patients and two more said they would do it, but to come back on Monday.

3:00-6:00: Practiced the measures with one of the new UNT volunteers. Then we made phone calls, so she could see how to leave voicemails and watch a few of the follow-up calls.

XIV. Week 14:

Monday, September 2, 2013

Labor Day/No Work

Tuesday, September 3, 2013

9:00-10:00: Made ICU list. Checked emails. Rounds were moved to 1pm today.

10:00-12:00: Lit review for thesis.

12:00-1:00: Trauma Conference.

1:00-3:00: ICU rounds.

3:00-4:00: Went to the floor to enroll patients. Lots of "thinking about it"

4:00-5:00: Data entry.

Wednesday, September 4, 2013

9:00-10:30: Checked emails. Made ICU list for FLOAT.

10:30-11:00: Went to the waiting room to find a family to enroll in FLOAT. Their son had declined rapidly overnight and they were very upset, so I talked to them a little bit about everything that was going on and will try to catch them tomorrow to enroll them in FLOAT.

11:00-12:30: Worked on thesis.

12:30-1:00: Lunch.

1:00-3:00:Entered data. Worked on thesis.

3:00-5:00: Went to the floor with Grace. We were able to enroll two patients into BTOP.

Thursday, September 5, 2013

9:00-10:00: Checked emails. Made ICU list for FLOAT.

10:00-12:00: Rounds were moved to 1pm today. Entered FLOAT data. Also made folder for the two people that we enrolled yesterday for BTOP.

12:00-1:00: Lunch.

1:00-3:00: ICU rounds. Found a couple of families for FLOAT. Both said to find them tomorrow or Monday. There are also a few families that are not eligible until Friday (less than 48 hrs).

3:00-5:00: Went to the floor and saw patients with Grace. We were able to enroll two patients for BTOP and also got a urine sample. Also watched Megan make changes to one of our measures in IRIS.

Friday, September 6, 2013

9:00-11:30: Checked emails. Made copies of TBI binders, as well as Sarita's CV baseline measures.

11:30-12:30: Entered BTOP data. Made a folder for the patient that I enrolled yesterday.

12:30-1:30: Made follow-up phone calls.

1:30-2:00: Lunch.

2:00-4:30: Saw patients on the floor. I was able to enroll one patient, but he discharged in the middle of the measures, so he is now an "incomplete" in the database. Also went through the ICU waiting room with Sarita to see if we could find any families for FLOAT.

4:30-5:30: Made follow-up phone calls for both FLOAT and BTOP.

XV. Week 15:

Monday, September 9, 2013

9:00-10:00: Checked emails. Made patient list for FLOAT.

10:00-11:30: Made patient list for BTOP.

11:30-12:30: Made follow-up phone calls.

12:30-1:00: Lunch.

1:00-4:00: Finished phone calls. Saw patients on the floor. Was not able to enroll anyone, but a couple of patients said to come back tomorrow, so I let Sarita know, since I will be out. We also walked around the waiting room to find families for FLOAT. One of the family members told us she would be here today to do the study, but we could not find her.

Tuesday, September 10, 2013

No work

Wednesday, September 11, 2013

No work

Thursday, September 12, 2013

9:00-10:00: Checked emails. Made ICU patient list for rounds.

10:00-11:30: ICU rounds.

11:30-1:15: Schwartz Rounds. These rounds were on the ethics surrounding one of the patients that we had had in the ICU and floor. Very interesting.

1:15-2:00: Made folder for one of the patients that Sarita enrolled yesterday.

2:00-3:30: Trauma Grand Rounds. Today's topic was on emergency management.

3:30-4:30: Follow-up calls. I was able to get a patient and finish his 3month call.

4:30-5:00: Lit Review for Megan on RN led chest tube removals.

Friday, September 13, 2013

9:00-12:00: Worked on thesis and thesis database. Dr. Warren wants to add depression to my thesis, so I pulled the data for that.

12:00-12:30: Lunch.

12:30-4:30: Lit review for thesis on depression and resilience.

4:30-5:30: Made follow-up phone calls.

XVI. Week 16:

Monday, September 16, 2013

9:00-10:00: Checked emails. Made patient list for FLOAT.

10:00-12:00: Worked on thesis. Added literature from new depression outcome. Talked with Stephanie about how we should analyze the data, especially the ICD-9 codes and etiology. We decided that we should group etiology into about 5 groups, but we still haven't decided on the ICD-9 codes. I also added the new ICD-9 codes that Louanna pulled for the remaining 30 patients that we had just added.

12:00-12:30:Lunch.

12:30-3:00: Saw patients on the floor with Grace. We were not able to get anyone, but there were a lot of "come backs," so hopefully we will be able to get them tomorrow.

3:00-6:00: Continued to work on thesis and database. I am continuing to add literature. I also made a few follow-up phone calls.

Tuesday, September 17, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-11:30: ICU rounds. Lots of new patients, but very few families for FLOAT. We walked around the waiting room to find families for Support Group, but could not find anyone that was interested.

11:30-1:00: Meeting with Dr. Warren to talk about my thesis data. We found a website that had already broken the etiology into groups, so we will use those groups in the analysis. We also decided that we will probably not use the ICD-9 codes, just because there is very little literature on the topic, instead, we will use blunt v. penetrating injury and use a dichotomous analysis. I also emailed Dr. Gwirtz to set up a conference call to talk about the data with Dr. Warren.

1:00-1:45: Saw patients on the floor with Megan and Grace. I took the ortho floor, so there were not many patients to see. It was also a bad time, because PT and OT were working with most of the patients that I needed to see.

1:45-3:00: CRC meeting with Todd Almarez. Topic was on drug discovery and the path that is taken from bench to market.

3:00-4:30: Worked on thesis literature. Still cannot find much data on ICD-9 codes.

4:30-5:00: Meeting with Jennifer.

5:00-5:30: Made follow-up phone calls.

Wednesday, September 18, 2013

9:00-12:00: Thesis work.

12:00-12:30: Lunch.

12:30-3:00: Saw patients on the floor. Lots of people were interested and I left packets with two patients. Hopefully, we will be able to get them tomorrow.

3:00-4:30: Lit Review for thesis. Found an interesting article on depression rates among people who were injured unintentionally (MCC, MVC, Fall, etc) and those injured intentionally by another human being (SW, GSW, Agg Assault). The study found that depression and PTSD rates are higher in those who were injured by the intention of another. I think it would be interesting to also look at that for my thesis. Just an idea though.

4:30-5:30: Made follow-up phone calls.

Thursday, September 19, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-11:30: ICU rounds. Lots of families eligible for the FLOAT study. We approached three of them after rounds. They all seemed interested, so we will try to find them after lunch.

11:30-12:00: Lit Review.

12:00-12:30: Lunch.

12:30-1:00: Organized files.

1:00-2:30: Lit Review.

2:30-5:00: Walked around the ICU waiting room with Sarita and tried to find the families that we had seen earlier during rounds. We were able to find one family and enrolled two family members into FLOAT. Hopefully tomorrow we will be able to find the other families too.

Friday, September 20, 2013

9:00-9:30: Checked emails. Printed list for 11th floor.

9:30-10:30: Therapy dog came today. Today's dog was Jinx. She is one of the respiratory therapist's dogs and is really good around the patients. Elizabeth, the respiratory therapist, was working today, so Jinx got to stay with us in our office.

10:30-12:00: Made patient list for both BTOP and FLOAT.

12:00-12:30: Lunch.

12:30-3:00: Entered FLOAT and BTOP data.

3:00-5:00: Saw patients on the floor.

XVII. Week 17:

Monday, September 23, 2013

Thesis day.

Tuesday, September 24, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-11:00: ICU rounds. There were not many patients in the unit, so rounds went by very quickly.

11:00-12:00: Scheduled defense data and reserved a room. Also, filled out "intent to defend" form.

12:00-1:00: Trauma conference. Today's topic was on different types of metal plates used to reinforce the sternum, as well as the proper way to insert an endotracheal tube.

1:00-3:00: Lit review. Worked on patient list some more to reflect information that we received during rounds. Did not see patients today because they were moving all of the patients on the 11^{th} floor to the 6^{th} floor of Truett today.

3:00-5:00: Entered patient data.

Wednesday, September 25, 2013

9:00-12:00: Wrote for thesis. Finished everything, I think, up to results and discussion sections. We are still waiting for the data to be analyzed.

12:00-12:30: Lunch.

12:30-3:30: Helped Megan code the data for the ortho paper.

3:30-6:00: Entered patient data. Worked on thesis more.

Thursday, September 26, 2013

9:00-10:00: Made patient list for ICU rounds. One of the UNT volunteers was here this morning, so I showed her how we make the lists and explained to her what the charts were saying.

10:00-11:00: ICU rounds.

11:00-11:30: Put up one of our research posters on the wall of the ICU waiting room. Also introduced one of the family members to our social worker. He attended support group on

Tuesday and we found out that he and his family were having a lot of problems financially, so Sarita helped them find restaurants and low-cost food places near-by and hopefully the social worker can find vouchers and other resources for them.

11:30-1:30: Updated patient list for FLOAT. Worked on patient list for BTOP.

1:30-2:00: Lunch.

2:00-3:00: Looked up data on injury severity score and etiology categories.

3:00-4:00: Went over my thesis database with Megan to decide which groups we should use and how we should code them.

4:00-4:30: Met with Megan to go over the schedule for next week since she will be out of town.

Friday, September 27, 2013

9:00-9:30: Check emails. Printed patient list for the 6th floor (the 11th floor of Roberts moved to the 6th floor of truett).

9:30-11:00: Therapy dog came today. Today's dog was Lilly and she dressed up as a nurse, with a nurse's hat, to visit all of the patients.

11:00-5:00: Spent the day going refining the database for my thesis, as well as adding information on ISS and etiology to my thesis.

5:00-5:45: Made "weekend" follow-up phone calls.

XVIII: Week 18:

Monday, September 30, 2013

9:00-9:30: Checked emails. Went over schedule that Megan made for us since she will be gone all week.

9:30-11:00: Dr. Gwirtz sent back edits to my thesis draft. Spent a good bit of time going over them and adding them to my draft. Added appendices to my thesis (consent, measures, demographic questions, IRB approval letter). Took a lot of time because I had to convert PDF's to word documents.

11:00-1:00: Mailed "Thank You" cards to the subjects who had completed 12 month follow ups.

1:00-1:30: Lunch with Sarita and Grace.

1:30-3:00: Added an "internship summary" section to my thesis draft.

3:00-4:00: Prepared for conference call with Dr. Gwirtz, Dr. Warren, and Dr. Aryal (the statistician at UNTHSC).

4:00-5:00: Conference call. Determined that I will go to UNTHSC sometime next week to meet with a graduate student and go over the statistics for my thesis.

Tuesday, October 1, 2013

9:00-10:30: Accidentally locked my keys and backpack in my car in the parking lot at BUMC, so I had to wait for Pop-A-Lock to come and unlock it for me.

1:30-12:30: ICU rounds. Found a good family for FLOAT, approached them and they seemed interested, but they had a lot of questions/concerns for Dr. Petrey, the physician in the ICU this week, and the neurosurgeon, so I told them I would come talk to them tomorrow, since today was not a good day. They were extended family and today was the first time they had seen the patient since his injury. I will check back with them tomorrow, once things have calmed down.

12:30-1:00: Trauma conference. Dr. Rabeler gave a talk on bladder injuries.

1:00-5:00: Analyzed the data with Stephanie with the statistics software on Megan's computer. We only did a simple analysis, mostly descriptive. I added all of the descriptive statistics to my thesis draft.

5:00-6:00: Made follow-up night calls. I stayed late since I came in late this morning.

Wednesday, October 2, 2013

9:00-10:30: Checked emails. Made ICU patient list. Lots of patients in the ICU today. Hopefully we will have families for FLOAT tomorrow. Did not see the family from yesterday in the waiting room this morning. Will walk through again this afternoon.

10:30-12:00: Did a lit review on Glasgow Coma Score (GCS) and resilience, depression, and outcome. There is not much data on the topic, so it might be interesting to add that to my thesis as well.

12:00-12:30: Had lunch with Sarita outside today.

12:30-1:30: Tech support came by because I could no longer access the shared drive.

1:30-2:30: Entered FLOAT data.

2:30-3:00: Tried to update the patient tracker with Grace, but we were not able to find the correct link.

3:00-3:30: Walked around the ICU waiting room and ICU with Sarita to try to find FLOAT families. Could not find any of the ones from yesterday. There were lots of people though, so we might be able to identify them and match them to a patient tomorrow during rounds.

3:30-4:30: Did more research on GCS.

4:30-5:30: Follow-up phone calls.

Thursday, October 3, 2013

9:00-10:00: Checked emails. Made patient list for rounds.

10:00-12:00: ICU rounds. Lots of families to approach for FLOAT.

12:00-12:30: Lunch.

12:30-1:00: Did quick job for Ann Marie. Looked at BTOP numbers at baseline, 3,6, and 12.

1:00-3:00: Made pain database for Stephanie (UNT volunteer).

3:00-5:00: Entered FLOAT and BTOP data. Made follow-up phone calls.

Friday, October 4, 2013

9:00-9:30: Made quick patient list for 6th floor.

9:30-11:00: Therapy dog day. Today's dog was a Rottweiler named Jem.

11:00-12:00: Went over patient list and how to make it with Lauren, our new UNT volunteer.

12:00-12:30: Lunch.

12:30-1:30: Continued showing Lauren how to make patient list and how to read patient charts.

1:30-2:30: Went with Lauren to parking services to get her badge and parking permit.

2:30-4:00: Saw BTOP patients with Lauren and Kristy (the other UNT volunteer). They shadowed me so they could see how baseline measures are administered. They will only do phone calls, but I think its good to see baseline measures too, so you know what happens before 3, 6, and 12 follow-ups. I also think its fun to see the hospital/patient side of clinical research.

4:00-5:00: Watched the volunteers practice the measures.

5:00-6:45: Made follow-up phone calls for "weekend" calls.

XIX: Week 19:

Monday, October 7, 2013

9:00-10:00: Checked emails. Made ICU patient list.

10:00-10:30: Looked up new contact numbers in Eclipsys for patients who do not have valid contact information.

10:30-11:00: Made follow-up phone call.

11:00-12:00: Finally finished pain database for Stephanie.

12:00-12:30: Lunch.

12:30-1:00: Sent reminder letters. Started to enter FLOAT data for Sarita.

1:00-3:00: Emailed grad students at UNTHSC, so that we can start analyzing data. We have a meeting set up for this Friday at UNTHSC. Worked on database with Stephanie. Categorized Resilience based on "low, intermediate, and high" resilience and made a new column into the database. Also categorized etiology into fewer groups that were more even.

3:00-3:30: Made and sent quick outline to UNTHSC statistics grad students, so they would know what my thesis was about.

3:30-5:30: Finished entering FLOAT data. Made follow-up phone calls.

Tuesday, October 8, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds. UNT volunteer was here, so she watched Sarita make a follow-up call.

10:00-11:00: ICU rounds. Saw a chest tube being put in during rounds. Not many families at bedside today, also most of the patients are being transferred to the floor.

11:00-12:00: Practiced measures with the UNT volunteer. Hopefully, next Thursday she will be able to start making calls on her own now.

12:00-1:00: Trauma conference. Lunch.

1:00-2:00: Finished making ICU list. Sent reminder emails to patients who we do not have contact information for.

2:00-4:30: Entered patients into the "patient tracker system." Also, looked up a few patients whose MRN #s we had entered into the database incorrectly.

4:30-5:30: Made follow-up phone calls.

Wednesday, October 9, 2013

9:00-9:30: Checked emails.

9:30-10:30: Made patient list for BTOP.

10:30-12:00: Made patient list for FLOAT.

12:00-12:30: Lunch.

12:30-1:30: Phone calls.

1:30-4:00: Did lit review for Megan on social media and its uses in the medical field.

4:00-5:30: Entered BTOP and FLOAT data.

Thursday, October 10, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-11:30: ICU rounds.

11:30-12:00: Fixed the bulletin board with Megan.

12:00-12:30: Lunch.

12:30-1:30: Made the list for BTOP.

1:30-3:00: Trauma Grand Rounds. Southwest Transplant Alliance came and talked to us about organ donation and the process they go through. One of my favorite talks so far.

3:00-4:00: Made phone calls.

4:00-5:00: Meeting with Dr. Warren and group. We talked about me possibly helping Dr. Petrey pull data for one of her studies.

Friday, October 11, 2013

Went to UNTHSC in Fort Worth to analyze the data with two of Dr. Aryal's statistics graduate students.

XX. Week 20:

Monday, October 14, 2013

9:00-11:00: Made patient list for BTOP and FLOAT.

11:00-12:00: Entered patient data. Made a follow-up phone call.

12:00-12:30: Lunch.

12:30-1:00: Continued to enter data.

1:00-3:00: Saw patients on the floor with Megan. We split the list. I was able to enroll one patient and she was able to get two.

3:00-5:15: Entered the data of the patients who we had enrolled today. We are now up to 404 patients. Anshula (Dr. Petrey's research assistant) added both Megan and me to Dr. Petrey's colon study, so once approved, we can start pulling data.

Tuesday, October 15, 2013

9:00-10:00: Checked emails. Made patient list for ICU rounds.

10:00-11:30: ICU rounds. We found out that the husband of one of the family members that we enrolled in FLOAT last week had passed away over night. This is the first family member in FLOAT to have lost their loved one, so it will be the first time we have to use the "bereavement" measures for 3, 6, and 12 months.

11:30-12:00: We found two family members for family support group during rounds, but when we tried to find them again to bring them back to the conference room, one was sleeping and the other was changing her baby, so we did not have anyone for support group.

12:00-1:00: Trauma conference. Instead of going to the conference, I emailed the UNTHSC statistics grad students back regarding their questions on the data and hypotheses.

1:00-2:00: Entered patient data. Helped Megan and Sarita write a blog for Halloween safety.

2:00-3:00: CRC Meeting for BRI. Today's topic was on BRI finances and the merger with Scott & White.

3:00-5:45: Split the BTOP regulatory binder into two binders because the one we had was overflowing. Also, updated everything (eg: patient enrollment logs, fluid collection log, BTOP code log, Protocol versions, etc).

Wednesday, October 16, 2013

9:00-10:30: Finished updating regulatory binders.

10:30-11:00: Entered FLOAT data.

11:00-12:00: Entered BTOP data and spot-checked the data that the volunteer had entered yesterday.

12:00-12:30: Lunch.

12:30-2:30: Updated FLOAT Regulatory binder.

2:30-3:30: Updated thesis abstract for submission to Southwestern Surgical Conference on Oct. 25.

3:30-5:00: Looked over Dr. Petrey's colon study protocol and data sheets, so I could be prepared for when I start extracting data. Also "google" searched damage control laparotomies to understand a little more about the study aims and background.

Thursday, October 17, 2013

9:00-10:00: Checked emails. Made list for ICU rounds.

10:00-11:30: ICU rounds. Found a few families for FLOAT. Will check up on them later.

11:30-12:00: Talked to a few of the family members after rounds. Also introduced one of them to the social worker, because she was having a very hard time and had very few contacts.

12:00-12:30: Lunch.

12:30-3:00: Entered BTOP data and checked database for errors.

3:00-5:00: Made follow-up phone calls.

Friday, October 18, 2013

9:00-10:00: Emailed stats students back regarding their questions. Also, set up a conference call with them for 2:30 today.

10:00-11:00: Made patient list for FLOAT. Helped one of the volunteers enter data. Jinx, one of the therapy dogs was here today, so I went to the ICU waiting room for a little bit, while Jinx visited with the families. A few of the families that we have been trying to enroll in FLOAT were there, so it was a good opportunity to talk to them more about the study.

11:00-12:30: Fall festival and lunch.

12:30-2:30: Helped Anshula (Dr. Petrey's research assistant) with the colon database.

2:30-3:00: Conference call with UNTHSC stats students.

3:00-6:00: Entered data for the colon study.

XXI. Week 21:

Monday, October 21, 2013

9:00-10:30: Made patient list for FLOAT.

10:30-12:00: Entered data for Dr. Petrey's colon study.

12:00-12:30: Lunch.

12:30-5:30: Entered data for colon study.

Tuesday, October 22, 2013

9:00-10:00: Checked emails. The stats students sent the data analysis back, so I spent some time looking over it with Megan and Dr. Warren.

10:00-11:15: Entered data for colon study. ICU rounds were pushed to 1:00pm this week.

11:15-11:30: Went to the ICU waiting room with Sarita to find families for support group. We were able to find two family members.

11:30-12:30: Entered data for colon study.

12:30-1:00: Lunch.

1:00-3:00: ICU rounds. Lots of families for FLOAT. I found 4 potential family members for today, and two who I think will do it, but are not emotionally ready yet. Also, two of the family members I found had to leave for the afternoon, but I gave them our office numbers and they will call tomorrow when they are free.

3:00-3:45: Enrolled one of the family members into FLOAT. I could not find the granddaughter of the other patient who I thought would do it today too.

3:45-4:15: Entered data for colon study.

4:15-5:00: Went over the data again with Dr. Warren and Megan to try to understand the analysis. We are having difficulty understanding what the students ran, so I will email Dr. Aryal at UNTHSC to ask.

5:00-5:45: Entered data for colon study. So far we have entered 75 patients. We are trying to have 250 by the end of the week.

Wednesday, October 23, 2013

9:00-10:30: Checked emails. Made patient list for ICU rounds.

10:30-12:00: Entered data for colon study. Went over the database with Anshula and included changes that Monica, the statistician, suggested making.

12:00-12:30: Lunch.

12:30-1:00: Walked around ICU waiting room with Sarita to find FLOAT families. We were able to find a family member, so Sarita enrolled her.

1:00-3:00: Entered colon data.

3:00-4:30: Meeting with Dr. Warren, Sarita, Megan, and Grace.

4:30-6:00: Entered colon data.

Thursday, October 24, 2013

9:00-10:30: Made ICU patient list for Sarita. She is sitting out in the waiting room today to try to enroll more patients for FLOAT.

10:30-12:00:Entered data for colon study.

12:00-12:30: Lunch.

12:30-2:30: Finally got the data back from the stats students. Spent a good part of the day trying to understand the analysis and interpret it. We made the rough draft for the abstract and sent it to everyone for edits.

2:30-6:00: Entered colon data.

Friday, October 25, 2013

9:00-9:30: Checked emails. Lauren, one of the student volunteers, was here, so I showed her how to pull charts.

9:30-11:00: Made calls with her. She is not ready to make calls on her own yet, so I let her leave voicemails.

11:00-12:00: Went to see the therapy dogs in the ICU waiting room. The families this week have formed somewhat of a support group in the waiting room, so it was neat to go out there with the dogs and talk to everyone. I hope this trend continues. One of the family members of a former

ICU patient, who is now on the floor, came back down during this time to see everyone, which I thought was really cool.

12:00-12:30: Lunch.

12:30-3:00: Entered colon data.

3:00-5:00: Went over Southwestern abstract analysis with Kenleigh and Megan to make sure that we were interpreting the stats analysis once again. Kenleigh also helped us proofread and edit.

5:00-8:00: Edited abstract with Megan for submission. We misread the word maximum for submission. We thought it said 3000 words instead of characters, so we had to condense it significantly. Talked everything over with Dr. Warren and Dr. Foreman to make sure that everything was correct.

XXII. Week 22:

Monday, October 28, 2013

9:00-10:00: Entered Colon Data.

10:00-11:00: Made patient list for ICU.

11:00-12:30: Entered FLOAT data.

12:30-1:00: Lunch.

1:00-2:00: Went over thesis data with Stephanie.

2:00-3:30: Went though each patient chart for the patients in my thesis database so I could add insurance status to my thesis.

3:30-5:00: Worked on thesis PPT presentation.

5:00-5:30: Follow up phone calls.

Tuesday, October 29, 2013

9:00-10:00: Made patient list for ICU rounds.

10:00-11:30: ICU rounds. Found families for support group.

11:30-12:00: Helped volunteer enter data. Answered the questions that she had (she stayed in the office and entered data while Megan, Sarita, and I went to rounds).

12:00-12:30: Lunch.

12:30-1:30: Looked over the output that Stephanie made yesterday.

1:30-2:30: Made a follow-up phone call.

2:30-3:00: Dr. Foreman came by and gave us an idea for a new study.

3:00-4:00: Sat in the ICU waiting room and did a lit review. Helped a family contact pastoral care because they wanted Last Rights for their family member. Also, helped a family member get parking vouchers.

4:00-5:00: Came back to the office to finish lit review. Found an interesting article on GCS scores in the process. According to the article, the motor response part of the GCS is the main predictor of outcome/survival. I will add this to my thesis.

Wednesday, October 30, 2013

9:00-10:00: Made patient list for ICU.

10:00-10:30: Meeting with Jennifer Thomas.

10:30-11:00: Helped Megan with her social medial abstract.

11:00-12:00: Lit review for thesis.

12:00-12:30: Lunch.

12:30-3:00: Entered BTOP data.

3:00-5:30: Added insurance status to the BTOP database for the remainder of the BTOP subjects (the ones that I had not already included from my thesis).

Thursday, October 31, 2013

Thesis Day.

Friday, November 1, 2013

9:00-12:00: Worked on thesis. Added changes that Dr. Gwirtz had sent. Also added page numbers and appendices. Emailed the draft back to Dr. Gwirtz for her to look over.

12:00-12:30: Lunch.

12:30-1:30: Pulled charts for calls today.

1:30-2:30: Proofread journal.

2:30-5:00: Entered data.

5:00-6:00: Made follow-up phone calls.

Appendix F

IRB Approval Letter

BAYLOR
Research Institute
Affiliated with Baylor Health Care System

IRB Approval – Expedited Review of New Study

To: Alan Cook

Copy to: Alan Cook

Date: January 24, 2012

Re: 012-028
The Baylor Trauma Outcome Project (BTOP)Phase One

Your new proposal was reviewed by a designated member of Baylor IRB Red via expedited review.

This study was determined to be eligible for expedited review as it involves no greater than minimal risk to the subjects and fits into the following category (ies) from the 1998 approved list:
Category 7: Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

This review included the following components:

❖ Study Application		Approved as Presented
❖ Return to Work-Spanish	Version 1.0	01/16/2012
❖ Return to Work-English	Version 1.0	01/16/2012
❖ Pain Scale-Spanish	Version 1.0	01/16/2012
❖ Pain Scale-English	Version 1.0	01/16/2012
❖ Audit-C-Spanish	Version 1.0	01/16/2012
❖ Audit-C-English	Version 1.0	01/16/2012
❖ PC-PTSD-Spanish	Version 1.0	01/16/2012
❖ PC-PTSD-English	Version 1.0	01/16/2012
❖ PHQ-9-english	Version 1.0	01/16/2012
❖ PHQ-9-Spanish	Version 1.0	01/16/2012
❖ SF-12-Spanish	Version 1.0	01/16/2012

❖ SF-12-English	Version 1.0	01/16/2012
❖ IRB Form 1	Version 1.0	01/16/2012
❖ Study Protocol	Version 1.0	01/16/2012
❖ Consent-Spanish	Version 1.1	01/16/2012
❖ Consent-English	Version 1.1	01/16/2012

Your submission has been approved. The approval period begins on 01/24/2012 and expires on 01/23/2013. Your next continuing review is scheduled for 12/24/2012.

This study is approved to be conducted at the following locations:
Baylor University Medical Center, Roberts, BUMC-Roberts 4 North/ICU

The following individuals are approved as members of the research team:
Cook, Alan; Foreman, Michael L., MS, MD, FACS; Self, Megan; Warren, Ann Marie, PhD

Informed consent must be obtained utilizing the document(s) as listed above. You must utilize a copy of the consent which includes the IRB approval stamp. Therefore, you will need to print new copies from the database which include the IRB approval stamp.

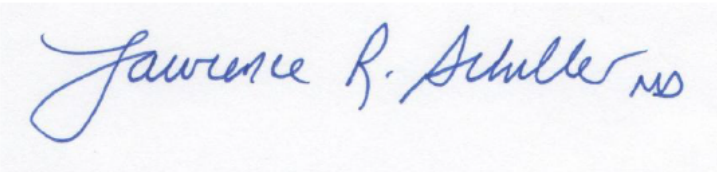
All events that occur on this study including protocol deviations, serious adverse events, and unanticipated problems involving risks to subjects /others, subject complaints or other similar events must be reported to the IRB in accordance with the respective policies.

Remember that this study is approved to be conducted as presented. Any revisions to this proposal and/or any of the referenced documents must be approved by the IRB prior to being implemented. Additionally, if you wish to begin using any new documents, these must receive IRB approval prior to implementation of them in the study.

IRB approval may not be the final approval needed to begin the study. All contractual, financial or other administrative issues must be resolved through Baylor Research Institute prior to beginning your study.

If you need additional assistance, please contact the IRB Coordinator at 214-820-9989.

Sincerely,



Signature applied by Lawrence R. Schiller on 01/25/2012 01:08:12 AM CST

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