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**The Experience of Trauma Resuscitation in the Emergency Department:
A Patient Perspective**

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Thesis submitted to the School of Graduate Studies and Research in partial
fulfillment of the requirements for the degree of Master of Science in Nursing.

University of Ottawa

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Abstract

Traumatic injury occurs without warning leaving no time to prepare. The patient may be frightened about the unknown, their future, or the prognosis. The patient arrives in the Emergency Department (ED) where assessment and management of injuries begins. Little is known about the patient's experience of trauma resuscitation. Therefore, a qualitative study using interpretive phenomenology was undertaken to describe the lived experience of trauma resuscitation in the ED.

A total of seven participants were interviewed after they experienced trauma resuscitation in the ED of a Lead Trauma Hospital. Tape-recorded interviews were conducted on the in-patient Trauma Unit between day 2 and day 7 post trauma resuscitation. Follow-up interviews were conducted with four participant's seven to twelve months after the initial interview. Data analysis utilized Colaizzi's eight-step analytical process.

Four themes were revealed in the data analysis: *I Remember, I Was Scared, I Felt Safe,* and *I Will Be OK*. The findings also revealed that initial perceptions of vulnerability subsided as a sense of feeling safe became prominent. System factors were acknowledged to influence the overall conviction that it was a positive experience. Lastly, nursing interventions were important in contributing to the participants' feelings of being safe. This suggests that comfort care measures need to be at the forefront of trauma nursing care as well as measures aimed at attaining physiological stability.

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Chapter 1 – Introduction

1.1 Background

Trauma is defined as “a major threat to the immediate and often long-term health of individuals.” (ENA, 2000, p. 1) It is the leading cause of death for people under age 45 in Canada (Smartrisk, 1998; Eastern Ontario Area Emergency Health Services Committee (EOAEHSC), 2000). In Ontario, trauma has been identified as one of the top three reasons for citizens to visit an Emergency Department (ED) (Chan, Schull, & Schultz, 2001). Results from previous research indicate an economic burden of traumatic injury on society. In 1997 Health Canada estimated the total national economic burden of both intentional and unintentional injury was \$14 billion (Smartrisk, 1998). The estimated economic burden encompassed direct medical costs, lost productivity, and premature death. In Eastern Ontario, falls accounted for 42% of the economic burden with Motor Vehicle Collisions (MVC) a distant second at 23% (EOAEHSC, 2000). Regionally, approximately 3,000 trauma patients were admitted to The Ottawa Hospital (TOH) last year and 11% were defined as major trauma based on injury severity scores (Trauma Services, 2002). The magnitude and morbidity associated with unintentional injury nationally, provincially, and locally in Eastern Ontario, suggest it is an important health issue. The economic significance of trauma on society would suggest that measures to avert or reduce the impact of injury should be embraced.

Trauma upsets the status quo in an individual’s world. Injury occurs suddenly and often without warning, forever changing the lives of patients and their families (ENA, 2000). Therefore, there is no time to plan or prepare; it must be dealt with once it has occurred

(Cardona, Hurn, Mason, Scalton, & Viese-Berry, 1994). The individual who sustains a traumatic injury has an immediate threat to physical integrity. The severity and complexity of the injury may compromise the individual's sense of control, and lack of control has been linked with perceptions of vulnerability (Irurita, 1996). It is in this transition from person to patient, Irurita (1996) suggests, that threatens an individual's integrity resulting in vulnerability; namely susceptibility to physical and/or emotional injury or harm. Being vulnerable is something individuals tend to avoid and protect themselves against. Despite great strides in the initial and ongoing development of trauma systems little is known about what it is like to be a trauma patient in the ED during acute resuscitation. Provision of care can be enhanced only when team members are cognizant of the patients' perception of the experience of trauma resuscitation in the ED.

The ED is the primary entry point to hospital for most trauma patients requiring medical care. According to Chan, Schull, and Schultz (2001) there is no standard definition for an ED in Ontario. However, they defined a full service ED as offering 24-hour service, seven days a week, to unscheduled ambulance and walk-in patients presenting with episodic and acute conditions (Chan, Schull, & Schultz, 2001).

A trauma system encompasses care from pre-hospital through to rehabilitation with a goal "to match a facility's resources with a patient's needs so that optimal and cost effective care is achieved" (American College of Surgeons (ACS), 1998. p. 5). A Canadian study compared 158 injured patients treated in an ED before it was designated a trauma centre and 288 patients treated within the first five months after it was a designated trauma hospital (Sampalis et al., 1995). Sampalis et al. demonstrated there is significantly improved survival of patients treated in a designated trauma centre that they suggested is a

result of increased surgical staffing, nursing support, and availability of advanced technology.

Lead Trauma Hospitals (LTH) are a regional resource centre for the city and surrounding area. Currently there are eleven LTHs in Ontario. Locally, TOH is the adult LTH and the Children's Hospital of Eastern Ontario is the LTH for pediatric trauma in the region. The responsibilities of a LTH include clinical care, education, research, outreach activities, injury prevention and management of a data registry for trauma.

This study described the experience of trauma resuscitation in the ED from a patient perspective. The study evolved from having a family member experience trauma resuscitation as well as from professional experience as an ED nurse. A personal family member's memory of the ED experience centered not only on aspects of care such as noise, pain, needles but also on the presence of loved ones at the bedside. This personal life event, in combination with several years experience working as an ED nurse in tertiary centers, has created interest in patients' perspective of trauma care and whether or not they perceive themselves to be vulnerable during trauma resuscitation.

1.2 Purpose

The purpose of this study was to describe the lived experience of trauma resuscitation in the ED.

1.3 Objectives

1. To describe the patient's perspective of trauma resuscitation.
2. To determine what, if any, perceptions of vulnerability exist during trauma resuscitation.

3. To determine what, if any, system factors influence the patient's experience.

1.4 Operational Definitions

Trauma nursing involves dealing with a population that has sustained sudden and unexpected injury. The trauma nurse must provide complex care to individuals who sustain injuries that vary in severity, magnitude, and complexity (Cardona et al., 1994).

A *trauma team* is comprised of registered nurses, physicians, respiratory therapists, and allied health care professionals who are proficient in caring for complex injuries (Cardona et al., 1994).

Resuscitation is synonymous with cardiopulmonary resuscitation (CPR). Closed chest compressions occur, on an intact chest wall, as the cardiac resuscitation team members establish an airway, assist breathing, gain intravenous access, and administer medications. In recent years, ED policies and practices have changed to include family members at the bedside during CPR.

Trauma resuscitation is a systematic, standardized approach of care by the trauma team members to help the patient return to his/her optimal pre-injury state of health (ENA, 1995). It may or may not include CPR. For the purposes of this study, trauma resuscitation will be referred to in the context of unintentional trauma. Intentional trauma, for example a suicide attempt, will not be within the definition of trauma resuscitation. Patients who are admitted as the result of intentional trauma will not be included as they may be experiencing psychological issues beyond the scope of this study.

A *Trauma Code*, an institutional protocol at TOH for trauma resuscitation, is an organized systematic approach for optimal clinical care for the injured patient. General

guidelines for initiating a *Trauma Code* include multi-system or significant single system injury.

Trauma Patient will denote any patient who sustains an unintentional injury that results in trauma resuscitation in the ED. Trauma patients may be admitted under Trauma Service, General Surgery, Orthopedics, or Thoracic Surgery.

1.5 The ED Setting

When a seriously injured patient arrives in the department, a quick assessment is completed by the ED physician who determines if trauma resuscitation is required. At TOH the trauma team members who are involved with the resuscitation include an ED physician, a Trauma Team Leader (TTL), surgical residents, three registered nurses, anesthesia resident, radiology technician, respiratory therapist, social worker, trauma coordinator (an RN) and other allied health professionals as required. The trauma team composition is based on the standards outlined in *Resources for Optimal Care of the Injured Patient: 1999* (ACS).

The TTL is an attending staff physician who is certified in Advanced Trauma Life Support (ATLS) and assumes responsibility for the overall coordination of care of the patient. The anesthesia resident establishes an airway and the respiratory therapist assists with airway control. Surgical residents are involved in patient assessment and perform necessary procedures such as insertion of chest tubes. Three registered nurses are assigned to the patient. The role of Nurse 1 is to coordinate the care of the patient in conjunction with the TTL as well as documentation. Nurse 2 establishes intravenous access and assists with primary and secondary assessment and procedures. The overall goal is to assess the airway, breathing, circulation, and disability (ABCDs) in the primary assessment, while

stopping to perform any necessary life saving intervention, prior to completing a more in-depth secondary assessment to determine all injuries (ENA, 2000). Assessment and procedures may occur simultaneously. Nurse 3 is on the opposite side of the patient to Nurse 2 and gets vital signs (blood pressure, heart rate, respiratory rate, and temperature) as well as assists with assessment and procedures. The social worker supports family once they arrive. The trauma coordinator acts as a resource to staff.

Trauma patients arrive in the ED, usually by ambulance, after the event. Patients are lying flat on backboards, with hard plastic cervical collars around their necks. Patients are further immobilized with wide strips of tape running across their foreheads and down to either side of the backboard to ensure they are not tempted to turn their head.

Once the initial assessment and management of life threatening and potentially life threatening injuries has been completed, a more in-depth evaluation begins. Basic X-rays may be done at the bedside, and then the patient may be transferred to the radiology department for further X-rays, perhaps a CT scan, or other more invasive diagnostic imaging.

Up to several hours may pass before a definitive diagnosis is made. The patient may go to the operating room (OR), the Intensive Care Unit (ICU), a Trauma Unit, or the ward. In the event that hospital beds are not available at the time the admission is requested, the patient faces the possibility of a prolonged stay in the ED.

The trauma protocol and ED environment does not provide for patient privacy: clothing is cut away and the patient exposed for observation and examination. There is no provision for patient modesty: he/she must be completely undressed in order to fully assess for injury, physicians are performing rectal examinations, nurses are inserting Foley

catheters, all while team members are surrounding the patient. There is no provision for a tranquil atmosphere: infusion pump alarms may be ringing, monitors beeping, team members talking, other patients yelling or crying, strange smells wafting in, and phones ringing. The patient may be frightened about the unknown, the future, or his/her prognosis. The patient may be alone, family and friends not yet having arrived in the ED.

Singularly or combined, factors such as exposure, lack of privacy, lack of family presence, procedures, and noise may affect a patient's perception of his/her vulnerability. In-depth understanding of the patient's experience can help in the provision of appropriate and timely nursing interventions.

Chapter 2 – Review of the Literature

In keeping with the principles of qualitative research, a selective review of the literature was completed prior to data collection, in order to guide the development of the research question. The review explores and discusses the literature related to trauma, trauma patients in the ED, trauma resuscitation, risk and vulnerability, and identifies a gap in knowledge regarding the patient's experience of trauma resuscitation in the ED.

2.1 Trauma in the ED

Cardona and Von Rueden (1994) describe cycles of trauma, from pre-hospital stabilization to rehabilitation. The ED, where resuscitation occurs, is considered the second cycle. Resuscitation begins with an initial assessment and involves initial assessment of airway (A), breathing (B), circulation (C), and neurological disability (D) (Cardona et al., 1994; ENA, 2000). The goal is to identify any life-threatening injuries and perform interventions necessary to manage these conditions. A secondary assessment, focusing on a systematic head-to-toe assessment to identify all injuries, follows. It is at this point that the nurse will obtain full vital signs, put the patient on a cardiac monitor, insert a Foley catheter and nasogastric tube, and ensure blood is sent to the laboratory for analysis (ENA, 2000). History related to the mechanism of injury, pre-hospital care, and past medical history are important to obtain at this time (ENA, 2000).

For most trauma patients, resuscitation in the ED is followed by an admission to a critical care area to manage their complex needs (Veise-Berry & Beachley, 1994), such as pulmonary support or nutrition. Once medically stable, patients may require support as they return their pre-injury life. This support is normally related to rehabilitation, such as

discharge planning or occupational therapy (Veise-Berry & Beachley, 1994). Prior to rehabilitation and after critical care, trauma patients may require operative and intermediate care as part of the cycle of trauma resuscitation (Veise-Berry & Beachley, 1994).

2.2 Trauma patients' experience in the ED

Caldwell (1978) is the oldest reference found relating directly to the ED trauma patients' experience. It has been several years since Caldwell described a trauma patient as being "stripped and skewered" (p. 250). The late 1990s signaled a renewed interest in ED patients demonstrated by the publication of several studies related to trauma care and family presence (Eichhorn, Meyers, Mitchell, & Guzzetta, 1996; Eichhorn et al., 2001; Hawley, 2000; Proctor, Morse & Khonsari, 1996; Timmermans, 1997). Although there is an increased sensitivity and awareness of emotional and psychosocial needs of patients and family, the initial focus must remain that of physically stabilizing the trauma patient.

An extensive review of the literature revealed a paucity related to patients' experience of trauma resuscitation in the ED. These patients are subjected to many stressors, such as multiple injuries, uncertainty, loss, and pain. For example, loss of independence in the trauma patient may be related to physical loss from actual injury. In addition, the initial focus on physiological stability by the trauma team members may preclude independent decision making by the patient. Pain, immobility, medications, and altered mental status may be considered barriers in decision making. Furthermore, trauma resuscitation assumes the patient is dependent on the team members. Support which may be required for an individual to manage effectively during vulnerable periods may be initially absent in the ED. Copp (1986) suggests that dehumanizing experiences, such as procedures,

examinations, and labels (e.g. the MVC patient) that result in loss of dignity also lead to loss of individuality. The many stressors experienced by trauma patients threaten both the physical and emotional integrity of the individual (Morse, 1997).

Morse (1997) described a five-stage theory related to how an individual responds to threat to integrity of self. The five stages are i) vigilance, ii) disruption, iii) enduring to live, iv) suffering, and v) learning to live with the altered self. Threat of integrity to self is relevant in the trauma population because these individuals are faced with their own mortality and the possibility of disability. Pertinent to this population in the ED are the first two stages, vigilance and disruption. The first stage, vigilance, is described as the time when individuals suspect something is wrong with their bodies. For trauma patients, this would occur immediately after the event when they begin to take inventory of their bodies for suspected injuries. The second stage, disruption, is described as the period when an individual holds on to life. It is suggested that the presence of family or friends may help the patient feel safe and secure. The third and fourth stages encompass the time when the patient begins to grasp the implications of his/her injury and making sense of it and this may begin in the ED or later on during their hospitalization. The final stage is when the patient begins re-evaluating and accepting his/her life post injury.

Despite suggestions that presence of family or friends may help patients feel more secure, there is a paucity of literature to support it. Research has primarily focused on family presence as being of benefit to the family rather than the patient (Adamowski, Dickinson, Weitzman, Roessler, and Carter-Snell, 1993; Eichhorn et al, 2001; Robinson, Mackenzie-Ross, Campbell, Hewson, Egleston, & Prevost, 1998; Timmermans, 1997). Robinson et al (1998) completed a randomized study of relatives of critically ill patients

who required cardiopulmonary resuscitation. Those families in the experimental group were given the option to remain with the patient while those in the control group were directed to the waiting room. Relatives who remained at the bedside were accompanied by a chaperone that provided emotional and informational support. Those family members were followed up one month post resuscitation and asked to complete a non-specified questionnaire about the decision to be present or absent during resuscitation. The findings suggested that there were no adverse effects on family members who witnessed the resuscitation and family were satisfied with their decision to remain at the bedside.

However, the study by Adamowski et al. (1993) determined that after the implementation of a multidisciplinary protocol, to notify and support family and friends of patients who had sudden unexpected death in the ED, there was a decrease from 95%, of family wanting to be at the bedside during resuscitation, to 11%. The study's authors suggested this dramatic decrease in the percent of family wanting to be present during resuscitation may have been due to the provision of greater support and information; consequently family felt more confidence in staff and the care they were providing to their loved one.

Family presence during resuscitation may be influenced by health care professional's perceptions. Timmermans (1997) explored this perception of resuscitative efforts of 57 various health care professionals who routinely participated in cardiopulmonary resuscitative efforts in the ED. Three perspectives were identified: survival, bifurcated, and holistic. Saving a human life is the only goal in the survival resuscitation perspective. Consequently, the presence of family members is not welcome as they may obstruct any necessary intervention. A bifurcated perspective is most commonly subscribed to by health care providers according to Timmermans. Staff work diligently to try to save the patient's

life while family members are cared for in a separate area. When family is invited to see their loved one, all traces of the resuscitation are removed or hidden by nurses prior to arrival. A holistic perspective considers the patient and family equally important. Patient survival is the overall goal but the family is an active member in the resuscitation, caring with the staff as opposed to being cared for by the staff. An understanding of these three perspectives may facilitate development and/or revision of family presence protocols during trauma resuscitation with which staff will be comfortable. To date, these three perspectives have not been explored in trauma resuscitation.

Patients' perception of family presence in the ED was explored in a study by Eichhorn et al. (2001). Eichhorn et al. interviewed nine patients, eight who had an invasive procedure and one that required CPR, to determine their perception of family presence in the ED. Only 55% of patients interviewed had a primary diagnosis of trauma. The invasive procedures included endotracheal intubation, chest tube insertion, central line insertion, orthopedic reduction and exploration of open wounds. Family was present at the bedside accompanied by a nurse or chaplain, acting as family facilitator, as per the institutional family presence protocol. Interviews were conducted with patients approximately two months after the ED experience. A significant finding was that family presence had a positive effect on patients. Patients suggested family presence comforted them, provided help and served as a reminder to staff that they have an identity. Family presence also supported the connection between family and patient and was viewed as a right by patients. To date, this appears to be the only study to mention trauma patients' perception of family presence in the ED. This study was a follow up to a synthesis of literature and research by Eichhorn et al. (1996) that examined family presence during resuscitation. Eichhorn et al.

suggested that nurses have “a moral and ethical imperative” (p. 61) to preserve the family unit with means such as family presence programs.

As mentioned earlier, the late 1990’s appeared to be a period when nursing research began to focus on care of trauma patients in the ED. A British study found that the provision of information, staying with patients, reassuring words, and hand holding were key communication elements reported by patients as the most important aspect of nurses’ work to reduce their anxiety and fear (Jay, 1996). Access to family, physical comfort measures and staff efficiency were also noted to be reassuring to patients. The study findings did suggest that despite a high Glasgow Coma Scale (GCS) indicating consciousness, patients claimed limited recall of their experiences. It was suggested this could be viewed as denial on the part of the patients. Of note, the study sample consisted of five seriously injured patients and two staff members who had offered to help since they had had recent injuries.

A Canadian study of 14 hospitalized patients who had been admitted via the ED were interviewed about their experience of being comforted by nurses (Hawley, 2000). However, only one of the 14 patients interviewed had been admitted as the result of traumatic injury. Five categories of nursing strategies were identified by patients as comforting: immediate and competent technical/physical care, positive talk, vigilance, attending to physical discomforts and including and attending to family. Further research would be needed to identify if these nursing strategies would be helpful with patients who have sustained traumatic injury.

Comfort in trauma care has been a recurring concept in several nursing studies over the past few years (Proctor et al., 1996; Morse & Proctor, 1998; Hawley, 2000). The *Comfort*

Talk Register was the result of a study that involved identification of linguistic features and intonation patterns of nurses caring for trauma patients in the ED (Proctor et al., 1996).

Videotaped data was collected on 29 patients who were treated in the trauma rooms of two Level 1 centers. The findings propose that nurses talk to trauma patients for four main reasons: “ i) to help patients hold on; ii) to obtain information that contributes to assessment of patients’ condition; iii) to give and receive information about procedures; and iv) to verbally communicate a sense of caring to the patient. ” (p. 1675)

In addition to *comfort talk*, nurses demonstrate caring behaviors to trauma patients in the ED. Nurse comfort behaviours were described by Morse and Proctor (1998) based on analysis of the videotapes obtained in their earlier 1996 study that resulted in the *Comfort Talk Register*. It is suggested by Morse and Proctor that comforting behaviours of nurses assist the seriously injured patient to endure the pain of injury and thus remain in control in the ED. Study findings suggested, in addition to comfort talk, touch, eye contact and nurses’ posture all contribute to patients enduring the pain of trauma care. Comforting behaviours of trauma team members may contribute to patients’ ability to remain in control during trauma resuscitation. Lack of control has been linked with perceptions of vulnerability (Irurita, 1996).

2.3 Risk and Vulnerability

The concepts of vulnerability and risk are difficult to separate. Risk is an epidemiological term that has been defined by Valanis (1992) as “the probability that an unfavorable event will occur” (p. 432). Risk is defined in Webster’s Dictionary as “a chance of encountering harm or loss; hazard; danger.” Rose and Killien (1983) suggest the

term 'at risk' is used to identify individuals who may develop problems due to the presence of potentially stressful factors in an individuals' immediate environment.

Vulnerability is defined in Webster's Dictionary as something "that may be wounded; capable of receiving injuries." The definition of vulnerability suggests a more personal perspective from within the individual. Spiers (2000) implies vulnerability is a key concept in nursing and should be considered as an adjective, reflecting a "state, perception or feeling of potential harm" (p. 716). This is congruent with a subjective perspective rather than an objective assessment. It also builds on an earlier definition of vulnerability as an individual's threshold for tolerating stress (Zubin & Spring, 1977).

Vulnerability tends to be a third party label. The literature, to date, refers to vulnerability as a state given by a third person, such as a health care provider, to an individual based on assessment of personal and environmental factors. For example, the homeless are vulnerable, or susceptible, to developing health problems because they may not get adequate nutrition.

Earlier work by Anthony (1974) studied children of schizophrenic parents to examine the relationship between risk, vulnerability, and psychiatric disorders in children. Risk was described as a "function of the actual physical and psychological environment" (p. 537) and vulnerability and invulnerability as "states of mind affected by exposure to risk" (p.537). Anthony (1974) concluded there is a relationship between vulnerability, risk, and psychiatric problems. Children susceptible to forces in the environment were considered vulnerable whereas children unaffected by environmental stressors were considered invulnerable.

The intricate relationship between risk and vulnerability makes it difficult to clearly separate the two concepts. The concepts tend to be referred to as: you are vulnerable *to* and at risk *for* something. This author suggests that risk is a term to which most individuals can relate. For example, a study by Papia et al. (1999) supports previous work suggesting trauma patients have an increased risk for developing an infection. Of 563 trauma patients admitted to a regional trauma center over the course of one year, Papia et al. determined 37% of all trauma patients' hospital stays were complicated by at least one infection. Consequently, both individuals and health care providers might consider a trauma patient at risk for developing an infection based on known quantifiable data or probability.

In summary, different views are found in the literature regarding risk and vulnerability. Spiers (2000) makes direct reference to the sparse amount of nursing literature exploring the individual's experience of vulnerability. Thus, an exploration of both the ED environment and an individuals' state of mind as factors affecting one's vulnerability during trauma resuscitation must be considered.

2.4 Factors related to vulnerability

Environmental and personal factors have been identified in the literature as being important when assessing vulnerability. The following section will briefly discuss these two factors as they relate to vulnerability.

Environmental Factors

A number of environmental factors have been related to vulnerability such as the immediate physical surroundings. Lessick, Woodring, Naber, and Halstead (1992) consider the environment a key factor. The environment is composed of diverse and changing

stimuli made up of factors that can potentially or actually influence an individual's vulnerability. An example of an environmental factor pertinent to the trauma patient is inadequate teaching related to an invasive procedure or absence of family members at the bedside. Factors within the environment may be assets or liabilities, therefore contributing to vulnerability in positive or negative ways. Vulnerability will be affected by the intensity, duration, frequency, amount, timing, and variety of stimuli within the environment (Lessick et al., 1992). A protective factor related to the environment, described by Rose and Killien (1983), is the social support provided to an individual by significant people. The interplay of environmental factors with personal factors may result in different responses for different people.

Personal factors

Rose and Killien (1983) describe the work of several authors who suggest the key personal factors which determine vulnerability are the relationship between risk and the individual's genetic make-up and personality traits.

Personal factors that trauma patients bring with them to the ED relate to their genetic composition, which includes emotional responses and personality, as well as acquired personal factors, such as injury (Anthony, 1974; Lessick et al., 1992; Rose & Killien, 1983). Trauma patients are dealing with the possibility of immediate physiological instability coupled with concern for potential long-term physical impairment. Education level, maturational level, past medical history and associated experience with health care professionals, pain tolerance, coping resources and strategies, alcohol and drug use, are examples of factors that individuals acquire during the course of their life experiences and bring with them to the ED. For example, it has been suggested that alcohol intoxication

alters hemodynamic and metabolic responses to hemorrhagic shock (Phelan, Stahls, Hunt, Bagby, and Molina, 2002) as well as the possibility of it being a preventative factor in the development of post traumatic stress disorder (PTSD) (Maes, Delmeire, Mylle & Altamura, 2001).

Lessick et al. (1992) considers constitutional equipment and contextual modifiers as personal factors related to vulnerability. Constitutional equipment is determined by genotype and early development, such as intactness of the body/organs, temperament, and susceptibility or resistance to disease. Contextual modifiers are described as bio-psychosocial-cognitive factors that influence individuals' vulnerability at any time, in any way.

Anthony (1974) suggested that an individuals' vulnerability will ultimately be affected by the proportion of personal and environmental factors at a given point in time. For example, with some individuals, family presence in the ED may decrease vulnerability and for others it may increase vulnerability if they derive little comfort from family presence. A review of studies exploring factors associated with being vulnerable to develop Post Traumatic Stress Disorder (PTSD) concluded it is difficult to make any definite distinction between biological and environmental influences (Yehuda, 1999).

One example of a study to determine factors related to vulnerability was conducted in individuals with a history of myocardial infarction (MI) during a five-year follow-up of a rehabilitation program (Lidell, Fridlund, & Segesten, 1998). Interviews were conducted with patients and no direct questions about vulnerability factors were asked as the research suggested patients might not admit to vulnerability or even be aware of it. The findings suggested vulnerability factors included patient characteristics of anxiety, inferiority,

insecurity, lack of intimacy, and disconfirmation (such as ingratitude) and that these factors developed over time. Lidell et al. (1998) concluded that vulnerability factors evolved over time. In addition, Lidell et al. suggested that patient's pre-MI experiences were the basis for their post-MI expressions of vulnerability. Consequently, vulnerability was determined to be a continuous process that was influenced by the relationship between the environment and an individual's emotional well being.

2.5 Models of vulnerability

The literature reflects two models of vulnerability developed by nurses: *The Vulnerability Model* (Lessick et al., 1992) and the *Model of Vulnerability* (Rogers, 1997). Each of these models will be discussed.

The Vulnerability Model

Lessick et al. (1992) developed a conceptual model of vulnerability that has a focus on the individual. The model is based on the individual-environment interaction and the consequences relative to health and illness. The model suggests an individual is a vulnerable system composed of biological, psychological, social, and cognitive dimensions. There is a dynamic relationship between the individual and environment as they both influence each other. The model does not address how the individual would perceive his/her own level of vulnerability. The underlying assumptions of the vulnerability model (1992) are “ i) the person is a vulnerable system that reflects the dynamic interrelationship between the person and environment; ii) every human is genetically unique, thus how an individual responds in a particular environment will be unique; iii) the environment contains a wide range of diverse and changing stimuli; iv) an

individual's level of vulnerability is dynamic; v) each person has a threshold of vulnerability beyond which illness may occur; vi) the threshold of vulnerability is individual; and vii) nursing intervention can affect vulnerability" (p. 3) . Lessick et al. stated that the model was being tested in a maternal-child nursing department and that other applications of the model are necessary.

Model of Vulnerability

Rogers (1997) developed a model of vulnerability suggesting that both personal resources and environmental support are factors that must be considered when determining an individual's level of vulnerability. The relationship between the degree of vulnerability experienced by an individual and the level of personal resources and environmental support became the basis of the model.

Rogers conceptualized the Model of Vulnerability as an equilateral triangle that demonstrated the interaction of the three variables: personal resource, environmental support, and degree of vulnerability. The base of the triangle represents vulnerability along a continuum of low to high. Each side of the triangle represents environmental supports and personal resources along a continuum from few to many. Estimating an individual's degree of vulnerability is determined by identifying an individual's level of personal resources on one side of the triangle and drawing a straight line from this point on the continuum to the opposite apex. An identical process is done for the environmental resources on the opposite side of the triangle. At the point of intersection, a line would then be drawn perpendicular to the base of the triangle. The point on the base of the triangle then corresponds to the degree of vulnerability experienced by the individual. Rogers states that individual's with the fewest personal resources and who are experiencing stressful or

hazardous environments are at highest risk for developing problems. Alternatively, it is suggested that a supportive environment in conjunction with strong personal resources will result in decreased vulnerability. The model of vulnerability has not been tested in populations. Application of the model in ascertaining the patient's perspective of vulnerability is required.

A critique of the models

A criticism of Rogers (1997) and Lessick et al. (1992) model is that they both favor an objective determination of vulnerability as opposed to an individuals' subjective assessment. In addition, the application of either model with the trauma population has not been tested. Consequently, the usefulness of a model to assess vulnerability in a clinical setting, for patients or practitioners, is unclear. Despite these criticisms the models do have merit. The basic tenet of each model is that personal and environmental factors jointly influence an individuals' degree of vulnerability and this is congruent with the literature. The main advantage with Rogers (1997) model is the apparent ease in ascertaining vulnerability using the equilateral triangle. As well, both models suggest vulnerability occurs along a continuum and can therefore reflect vulnerability at any point in time.

2.6 Vulnerability as continuum based

When considering vulnerability as continuum based, it is important to take into account that individuals have periods of low, medium, and high vulnerability. Zubin and Spring (1977) suggest the degree of vulnerability individuals experiences is related to challenging life events. They suggest that if the stress of life events is below the threshold of vulnerability, individuals will maintain homeostasis. However, if individuals sustain an

event which surpasses their stress threshold, then they would be vulnerable (Zubin & Spring, 1977). The patient rather than a third party, such as a health care professional, decides the degree of vulnerability. Consequently, for the trauma patient, perceptions of vulnerability may fluctuate with adequate pain management, the arrival of family members, or a definitive diagnosis being made.

Copp (1986) suggests that when wellness and effective management of life's situations changes to that of limited control and health threat, a condition for vulnerability exists. Copp (1986) categorizes types of vulnerability along a continuum. Two that are relevant to the trauma population are circumstantial and temporary vulnerability. Circumstantial vulnerability occurs in individuals who were previously well but circumstances beyond their control result in a threat to their health. Temporary vulnerability results from a time limited incapacitation, again primarily related to trauma. It is difficult to distinguish between circumstantial and temporary vulnerability despite the definitions by Copp (1986). Copp (1986) suggests factors that influence vulnerability include loss of independence, barriers to making choices, absence of that which is needed, and loss of individuality. These factors are similar to those proposed by Irurita (1996) who suggests factors associated with increased vulnerability include actual injury, illness or impairment and associated dependence, age, power imbalance, lack of information, and loss of individuality.

2.7 Summary of the review of the literature

Trauma care has been explored as it relates to the process of resuscitation. It has only been in the last few years that the significance of trauma care in the ED to patients, as well as exploration of family presence, has been reflected in the literature. The concepts of risk

and vulnerability have been explored and remain difficult to view in isolation. There may be a range of environmental and personal factors involved with the concept of vulnerability but the relationship to the patient in the ED environment is unknown. Research is required to understand the lived experience of trauma resuscitation as well as whether perceptions of vulnerability exist in these patients. A qualitative study examining the trauma patient's experience and perception of vulnerability while in the ED is justified.

Chapter 3 – Methods

This chapter discusses the research method selected for this study. In addition, the procedures for data collection, the interview process, and data analysis are reviewed in detail.

3.1 Design

The study used interpretive phenomenology to explore patients' experience of trauma resuscitation in the ED. Phenomenology is an ideal approach to gain an understanding of an experience from the patient perspective. The goal is to accurately describe the experience of the phenomena and not generation of theory (Annells, 1996; Morse & Field, 1995). An interpretive account of the lived experience of trauma resuscitation may assist nurses to develop greater sensitivity to what it is like to live through the experience, allowing the provision of care to be enhanced.

Hermeneutics is a method of studying humans based on the Heideggerian phenomenological view of an individual (Benner, 1994). Heidegger believed it was important to investigate the world from an ontological perspective that considered questioning what it is like to be a person (Benner, 1994). Consequently, a phenomenological hermeneutic design allows consideration of the whole person within the context of the trauma experience. A hermeneutic design does not require the researcher to bracket off his/her world experiences or the context of both personal and professional experiences. This design acknowledges that the researcher has a pre-understanding of the phenomena and that it is "not something we can eliminate or bracket, it is already with us in the world" (Koch, 1995, p 831). Therefore researchers bring to any data analysis their

own backgrounds and frames of reference which cannot be distanced from the phenomena of interest (Koch, 1996). Researchers share the patient experiences in the course of the interviews.

3.2 Methodological Assumptions

The following list of assumptions is based on the beliefs of the researcher, as related to the study, so as not to bias interpretation in analysis.

1. The focus of initial trauma resuscitation is physical stabilization.
2. The ED environment is perceived to be chaotic by non-ED staff.
3. What happens in the ED may set the tone for the patient's hospital experience.
4. Trauma resuscitation differs from other resuscitative care provided to ED patients.
5. Trauma resuscitation has meaning to patients.
6. The experiences of the patients undergoing trauma resuscitation are unique to the trauma population.

3.3 Sample

A purposeful sample of participants, who consented to discuss their experience with the researcher, was chosen. Purposeful sampling is supported by Sandelowski (1986) who suggests participants are selected who can "illuminate the phenomena being studied"

(p. 31). The researcher selected trauma patients who met the following inclusion criteria:

1. Age 18 years or greater;
2. 'Trauma Code' initiated in the ED. A trauma code is an institutional protocol based on injury severity indices and physician judgment;

3. Glasgow Coma Score (GCS) greater than or equal to 13 in the ED. A GCS range of 13 to 15 suggests the patient will have sustained moderate to no head injury, and therefore will recollect the ED experience;
4. Revised Trauma Score (RTS) of greater than or equal to 10. Coded values are assigned to the Glasgow Coma Scale, respiratory rate, and systolic blood pressure to indicate severity of injury. A range of 10 to 12 suggests the patient is stable and therefore likely to recall the ED experience;
5. The patient will be physically and cognitively capable of participating in an interview, as determined in consultation with the primary care nurse on the ward;
6. The patient must be able to participate in the interview in English.

Sample size was not determined prior to commencement of patient recruitment but rather re-evaluated on an on-going basis during data collection. Rather than sampling a predetermined number of participants, a qualitative researcher looks for saturation and redundancy of information to determine sample size (Morse & Field, 1995; Parse, Coyne, & Smith, 1985; Polit & Hungler, 1999). Saturation is achieved once the researcher has noted repetition from multiple sources (Denzin & Lincoln, 1994). In general, phenomenologic studies are based on samples of 10 or fewer study participants (Polit & Hungler, 1999). Saturation was noted by the seventh participant, therefore the researcher concluded adequate sampling had been achieved. Of these seven participants, six met the inclusion criteria and one participant (Francois) met the criteria 'in theory.' Francois was a multiple trauma patient who was treated in the ED as a 'Trauma Code,' and his care reflected the institutional protocols for a trauma code patient, yet a 'Trauma Code' was not formally initiated. Discussion with the screening nurse (and between the researcher and

thesis advisor) determined that in Francois's case a 'Trauma Code' was not initiated as the members of the Trauma Code Team were already present in the ED upon his arrival. It was felt that initiation of a 'Trauma Code' at that time would have been for data entry purposes alone and would not have altered the clinical course of the trauma resuscitation. Consequently, Francois was approached and consented to participate in the study.

3.4 Setting

TOH was selected as an appropriate site for this study as it is a LTH. There are three trauma resuscitation bays in the ED where this study occurred. The trauma bays are in a self-contained room, separated with sliding glass doors; from an eleven bed acute care area. Each trauma resuscitation bay is set-up identically. Each bay is equipped with a cardiac arrest cart, oxygen and air outlets, suction set-up, a cardiac monitor with the capability for cardiac, non-invasive and/or arterial blood pressure, oxygen saturation, and temperature monitoring. Procedure trays are ready, for example for chest tube insertion or central line insertion.

Feasibility precluded any serious consideration of the ED as a setting for data collection. The trauma patients approached for this study were those who were routinely transferred to the Trauma Unit after stabilization in the ED, ICU, or OR. Consequently the Trauma Unit was a practical location and provided the researcher easy accessibility to the participants. The recency of the experience was captured with the patient still in hospital in the Trauma Unit. This is in line with Morse and Field (1995) who suggest maximizing the intensity of the experience.

At the time of data collection, the Trauma Unit of TOH was a five-bed in-patient unit situated at the General Campus. Patients are admitted to the unit with Trauma as the

admitting service. Physically, the unit is situated on a general surgery ward and is comprised of two double occupancy rooms and one single room. These dedicated trauma rooms are side-by-side-by-side. There are dedicated positions for Registered Nurse staff in the Trauma Unit. All RNs working in the unit receive a specialized three-day orientation. It functions as a step-down unit and has the capability for cardiac monitoring. Any trauma patients requiring intubation and mechanical ventilation must be admitted to the ICU.

3.5 Process of Data Collection

Prior to any patient interviews being conducted, the researcher explained the study to both nursing and medical staff on the Trauma Unit, using staff meetings or rounds as a format. In addition, an information package containing a copy of the summary of the research project and patient consent/information sheet was available on the patient care units as a reference for staff.

The Trauma Coordinator (or designate) screened all trauma code patients for study eligibility on a daily basis (Appendix A). As a component of his/her role, the Trauma Services Data Analyst determines trauma admissions. Patients who met the study criteria were then approached by the Trauma Coordinator within 24 hours of admission to inform them about the study and request permission to forward their names to the researcher.

Daily communication between the Trauma Coordinator and researcher occurred via telephone or email to determine if any eligible patients had agreed to speak with the researcher. A total of 10 patients were approached by the Trauma Coordinator to participate in the study. Of those approached only one trauma patient refused to have his name forwarded to, and speak with, the researcher. Two other potential participants who

had agreed to speak with the researcher were not approached, as the researcher was unavailable (due to family emergency).

Names and admitting unit data of those patients who agreed to participate were then provided to the researcher by the Trauma Coordinator. Eligibility was further determined by the researcher, within 24 hours, in consultation with the admitting unit's primary nurse to ascertain the medical stability of the potential participant. Potential participants, deemed stable by the nursing staff, were then approached by the researcher to invite them to take part in the study.

The researcher obtained consent by verbally describing the purpose of the study and the requirements of the participant. A study information/consent (Appendix B) sheet was left with the potential participant to review and ask questions. Consent occurred in the initial visit with most participants. To allow participants an opportunity to reflect on involvement in the study and/or discuss it with family members or friends, a 24-hour time period was offered.

In order to maximize patient recollection of the experience of trauma resuscitation in the ED, the interviews with the researcher occurred two to seven days post trauma resuscitation. The median length of stay in hospital for trauma patients is nine days (Trauma Services, 2002). Consequently, an initial interview within two to seven days of admission allows for flexibility in scheduling an interview while the patient is still in hospital. A pre-scheduled interview time was set between the participant and the researcher, in consultation with the nursing and/or medical team. The interview time was selected so as not to conflict with any medical and/or nursing treatment/interventions the patient required. The Trauma Unit staff was very supportive of the study and facilitated the

scheduling of interviews. Four of the interviews occurred two days post-trauma, two on day four and one on day seven after being postponed from day five because the patient was taken to the OR just prior to the pre-scheduled interview.

Arrangements were made to interview participants privately. Participants admitted to single rooms were interviewed in their rooms. Participants admitted to a semi-private room required special consideration for the interview. If the participant was without a roommate at the time of the interview, the interview was conducted in the room. Participants with roommates were interviewed in a conference room near the Trauma Unit, and were transferred via wheelchair, after permission was sought from the nursing and/or medical staff. Nursing staff was aware, at all times, of the patient's location. The researcher, as an active emergency room nurse, was qualified to assess patients for any medical emergencies, and therefore patient safety was maintained. Prior to beginning the study, the researcher met with the Nursing Clinical Director of Surgery and the Nurse Unit Manager and they both indicated there would be no difficulty in finding an appropriate interview venue on the unit (letters of support, Appendix C).

3.6 Characteristics of Participants

A description of the characteristics of the participants contributes to the understanding of their experience of trauma resuscitation. Of the seven trauma patients interviewed, four were male and three female. The age of the participants ranged from 31 to 55 years, with a mean age of 44.5 years. All participants were Caucasian. Five spoke English as their first language and two spoke English as their second language. Two of the participants had been initially assessed and stabilized in a community hospital ED prior to being transferred to TOH. All Trauma Codes were initiated at TOH.

Table 1 represents a summary of the participant demographics. For reasons of confidentiality, each participant has been given a pseudonym. Of interest, the characteristics of the study participants reflect the general trauma population admitted to TOH (Trauma Services, 2002).

Table 1 – Description of Participants

Name	Georgette	Francois	Bob	Sam	Sue	Mike	Brenda
Age	54 yrs	55 yrs	45 yrs	31 yrs	49 yrs	41 yrs	37 yrs
Gender	Female	Male	Male	Male	Female	Male	Female
Work	Office Assistant	Manager	Service technician	Tree cutter	Supervisor	Labourer	Cook
Interview day post-trauma	2	4	2	4	7	2	2
Mechanism of injury (as described by patient)	Fell off roof while clearing snow	Driving home from work when his car was hit on the driver's side by another car	Fell through plate glass window	Fell approx. 60 feet out of a tree while at work	Head on collision while driving to work	MVC	MVC – driving and lost control of car and crashed. Had been drinking alcohol prior.
Actual injuries as described by patient	# L elbow # L ribs L pneumo-hemothorax	# ribs punctured lung Detached diaphragm Cuts Bruises	Lacerated L carotid artery Lacerated L ear	Broken back 2 broken legs	# face # ankle Internal stomach injury	To observe for low BP and possible abdominal Injury Head laceration	# clavicle
Direct admission vs. transfer	Direct	Direct	Direct	Direct	Transfer	Transfer	Direct

The mechanisms of injury were motor vehicle collisions (MVCs) and falls. The researcher did not have access to participants' medical records so all references to mechanism of injury and subsequent mention of specific injuries are based on participants' understanding. Participant #1, Georgette, in an effort to assist her ill husband, was clearing

snow off the roof when she slipped and fell. Participant #2, Francois, was driving home from work and his car was struck by another car on the driver's side. Participant #3, Bob, fell through a plate glass door in an apartment lobby – no further details were provided to the interviewer. Participant #4, Sam, a professional tree cutter, fell approximately 60 feet out of a tree. Participant #5, Sue, was driving during a snowstorm and crashed into another car. Mike, participant #6, was involved in a MVC and did not offer the interviewer any further details. Lastly, participant #7, Brenda, admitted to drinking and driving that resulted in her crashing her car into a tree. Sue and Mike were initially assessed and stabilized at two different community hospitals prior to transfer to the trauma center.

Only one of the participants had ever been admitted to hospital in the past. Of the remaining six participants, one had a prior ED visit, one had accompanied a family member to an ED and four had no prior experience as a patient or visitor in an ED or hospital. All were employed at the time of their admission.

3.7 The Interview Process

Semi-structured interviews are common in qualitative research because they allow for some pre-established questions and yet provide the participants leeway in their responses (Streubert & Carpenter, 1999) since there are no set answers. Streubert and Carpenter (1999) suggest interviews allow the researcher to enter the participant's world in addition to being an excellent source of data. The objective of the interview in this study was to allow the participant to reflect on and describe (Parse, Coyne & Smith, 1985) the experience as a patient having sustained a traumatic injury rather than simply recall specific anecdotes (Little, 1999).

In order to accurately describe the study population, each interview was preceded by the researcher collecting both demographic and clinical data from the participants. Demographic data was obtained from the participant. The Trauma Coordinator identified potential participants as per the inclusion criteria. The researcher did not have access to participants' charts but clinical data from the participant's perspective was obtained. See Appendix 'D' for Demographic Profile Data Sheet and also presented in Table 1.

Prior to the beginning of each interview, the researcher reiterated the purpose of the study and that participants were free to stop the interview at any time or skip over any questions to which they were not comfortable responding. The participants were welcoming and appeared eager to share their experiences of trauma resuscitation in the ED.

One-on-one semi-structured interviews were conducted with six participants who were admitted to the Trauma Unit of TOH and one participant who was admitted to an orthopedic ward. Five of the seven interviews were conducted in the participant's hospital room. Georgette was interviewed while she was sitting in a chair at the bedside. She was dressed in a hospital gown, her left arm in a cast and supported on pillows. An IV in her right forearm was infusing via an IMED pump. Oxygen was being administered by nasal prongs and her left chest tube was draining blood. She was attached to both a cardiac and oxygen saturation monitor. Francois was interviewed while he was sitting in semi-fowlers position in his bed. He was dressed in sweat pants only. He was receiving oxygen by nasal prongs and had bilateral chest tubes in situ. Sam was dressed in a hospital gown and interviewed while in bed. An intravenous and Patient Controlled Analgesia (PCA) pump was infusing. Sam was lying supine in bed due to bilateral back slabs to the lower

extremities and dressings to both thighs. Due to extensive orthopedic injury, Sue was also interviewed in her room while she was supine in the bed. An intravenous, in her left arm, was infusing via an IMED pump. Her left leg was casted and elevated on several pillows. Mike was interviewed in his room while lying supine in bed. He was dressed in a hospital gown and, other than a saline lock, appeared to have no other monitoring. Both Bob and Brenda were able to ambulate and were interviewed in the conference room on the Trauma Unit. Bob and Brenda were dressed in hospital pajamas and had saline locks in situ at the time of the interviews. All of the participants had a variety of visible external abrasions, lacerations and contusions.

In response to participants' expressed concern that they did not know "where to begin" in telling their story, the initial statement posed was "Tell me what happened to you before you came to the emergency room." Beginning an interview with "Tell me..." is supported by Morse and Field (1995). As the pre-hospital event was the precursor to the experience of trauma resuscitation in the ED, it was a natural starting point for the participants. Basic listening sequence (BLS) demonstrated by questioning, encouraging, paraphrasing, reflection of feeling and summarizing (Ivey, 1994) was used by the interviewer to let the participants know they were being heard. Ivey (1994) suggests that when individuals feel that they are being heard they are more likely to explore issues and feelings in greater depth. Consequently, the researcher used the BLS (Appendix E) during the interviews, with for example encouraging phrases such as "um hum" and "tell me more". The loosely structured discussion allowed a full range of beliefs, feelings, and behaviours to be expressed with the intention that the participants would 'tell their stories' (Morse & Field, 1995). During the interviews the researcher was sensitive to the recency of the traumatic

event for the participants and was watchful for signs of fatigue, pain or other discomfort. For example, when observing a grimace the researcher asked if the participant was experiencing pain and offered to stop the interview until he/she was more comfortable.

Each interview was tape-recorded and the tapes then transcribed verbatim by the researcher as soon as possible after the interview to facilitate data analysis. Initial interviews ranged in length from 30 to 70 minutes with an average of 45 minutes per interview. Overall, participants were poised and relayed their stories in sequence from time of injury up to and including admission. An account of the participants' activities and behaviours was maintained by the researcher (Contact Summary Sheet, Appendix F) during each interview as part of the field notes as suggested by Rogers & Cowles (1993).

3.8 Data Analysis

The goal of the interpretative analysis is to understand the meaning of the patient's experience of trauma resuscitation in the ED. Data analysis followed Colaizzi's (1978) eight-step analytical process to bring order to the large amount of data collected. The steps outlined by Colaizzi (1978) are summed up as follows: abstracting from participants' words to formulate the essential meanings in the experiences, meanings were then grouped to constitute themes, themes were grouped into clusters, and clusters were grouped into categories. This organized, systematic approach guided the researcher in the collection of information, identification of codes, categories and themes, writing up an exhaustive description, and returning to the participants for verification of the researcher's understanding of their experiences.

The initial step in the data analysis required the researcher to become familiar with the participants' descriptions of the experience. As soon as possible after each interview the

tape was transcribed verbatim by the researcher. The manner in which information is delivered is as important as the information itself (Sandelowski, 1993). In an effort to capture the full essence of each interview, transcriptions included gestures, crying, laughter, and pauses bracketed in italics to correspond where applicable. The researcher included participants' non-verbal communication on the Contact Summary Sheet during the interview. The tape was then replayed and verified against the transcript to ensure accuracy. The transcripts were subsequently re-read several times by the researcher. Although videotaping has been used with qualitative research, it was not a feasible option in this study for practical (i.e.: interviews conducted in several places) and financial reasons.

Each transcript had a two-inch margin down the right side of the page to facilitate coding and allowed the researcher to place comments. Coding is defined by Streubert and Carpenter (1999) as the process of grouping statements and giving them codes for ease of identification at a later time. Miles and Huberman (1994) state "coding is analysis." (p. 56) The transcripts were analyzed line-by-line to identify key words and phrases that were subsequently colour-coded. A manual method of colour coding was used to sort the data. Codes were operationally defined in order to be consistent throughout the study. Coding allows the researcher to take raw data and transform it into a format that will facilitate the identification of recurring words and concepts (Polit & Hungler, 1999). Codes were then placed into broad categories as patterns emerged (Appendix G).

Polit and Hungler (1999) define a theme as a "recurring regularity emerging from analysis of the data" (p. 716). As the researcher became more immersed in the data and the interviews were continually re-examined, the initial categories were redefined. Polit and

Hungler (1999) suggest themes often evolve within the categories. The aim of analysis was to extract themes in descriptions of the experience from the interview data. Data collection ceased when stories and themes repeated themselves, as saturation had been reached (Polit & Hungler, 1999).

3.9 Methods to Ensure Rigor

In qualitative research, rigor is of paramount importance. Sandelowski (1986) provides the qualitative researcher with a framework to ensure rigor which includes the four factors of truth-value (credibility), applicability (fittingness), consistency (auditability), and neutrality (confirmability). These four components were used in this study to ensure trustworthiness of the data and subsequent analysis.

Truth-value (credibility) is related to internal validity. Recorded interviews and review of data analysis with participants were used to address credibility. Morse and Field (1995) state credibility results from clear reporting of the participants' perspectives. Thus, second interviews were completed with four participants to verify the researcher understood their experiences of trauma resuscitation in the ED. These interviews were conducted between seven and 12 months following the initial interviews. The timeline for the second interview was based on the time required to complete the data analysis. Second interviews were conducted with Bob and Francois in a conference room at TOH, at their request. The follow-up interview with Brenda was conducted in her apartment. The researcher drove 90 minutes west of Ottawa to complete the second interview with Sue in her home. The follow-up interviews ranged in length from 20 to 45 minutes, with an average of 31 minutes per interview. Participants were also provided with a copy of the transcript of

their initial interview. Again, each follow-up interview was tape-recorded and then transcribed verbatim by the researcher as soon as possible after the interview.

Feedback from the participant is referred to in the literature as a member check, and is defined by Polit and Hungler (1999) as a method to validate the credibility of the data through discussion with participants. Participants' recognition of their own experiences supports the study's credibility (Sandelowski, 1986). The second interview allowed the researcher to receive feedback about the participants' understanding of their experience of trauma resuscitation. In addition, experts in qualitative methods reviewed the transcriptions to validate categories, thus supporting the credibility of the study.

Koch (1996) suggests a second method to ensure credibility is via use of a journal by the researcher. Enhanced credibility of the researcher's descriptions and interpretations result from maintenance of a journal as the researcher documents his/her experiences. Rogers and Cowles (1993) support maintenance of a journal in order to record all methodological decisions made throughout the study, including rationale and impetus for all decisions. Documentation of the analytic process, specifically, the researcher's thought processes when sorting, coding and categorizing data must be clear and consistent in order to ensure rigorous analysis (Rogers & Cowles, 1993). Finally, Rogers and Cowles (1993) believe the researcher should record personal responses to interviews as a means of catharsis when researching potentially sensitive or emotional topics.

Applicability (fittingness) determines whether or not the finding may be applied to other settings or populations (Morse & Field, 1995). Participants in this study were purposely selected, since the focus was the experience of trauma resuscitation in the ED.

Sandelowski (1986) suggests 'fittingness' is met when the study findings can "fit into

contexts outside the study situation” (p.32) and are meaningful and applicable to others’ experiences. The criteria of applicability were met since participants with varied experiences and backgrounds found the findings meaningful. Examples of the variety of participants included male and female, direct admissions to the trauma center and those referred from community hospitals, white collar and blue collar employment status, Anglophone and Francophone heritage as well as those with some or no prior hospital experience.

Consistency (auditability) occurs when another researcher can follow the course of thought of the investigator (Sandelowski, 1986). In this study the researcher followed Rogers and Cowles’ (1993) suggestions for a qualitative research audit trail that included tape-recorded interviews, transcripts, field notes, and a journal maintained by the researcher. Furthermore a thesis committee comprised of expert qualitative researchers supported the data analysis and research findings.

The fourth factor to consider with rigor is *neutrality* (confirmability). Confirmability is met when audibility, truth-value and applicability are established (Sandelowski, 1986; Streubert & Carpenter, 1999). The criterion of neutrality is met by the researcher verifying the analysis with participants as well as through the thesis committee members.

3.10 Protection of human rights

This research study received ethical approval by TOH Research Ethics Board and TOH Nursing Research Ethics Review Committee prior to commencement of patient recruitment. Participants were provided time to consider their decisions to participate. Prior to commencement of the interview, all participants reviewed and signed the

information/consent form and received a copy. Pseudonyms were used for all participants to assure privacy and confidentiality. All patient information, transcripts, and tape-recorded interviews were kept in a locked office.

Chapter 4: Findings

4.1 Introduction

Analysis of the data revealed that the experience of trauma resuscitation in the ED was one in which the patient ultimately felt safe. Participants described their experience along a continuum from time of injury to their post-injury future. Four main themes were revealed during data analysis: *I Remember*, *I Was Scared*, *I Felt Safe*, and *I Will Be OK*. The final themes and descriptors are found in Table 2.

Table 2 – Final Themes and Descriptors

Theme	Descriptors
I Remember	* The Event * Being Frustrated
I Was Scared	* Living through shock and pain * Feeling alone * Not knowing
I Felt Safe	* They were efficient - everything went so quick - they gave me confidence - they were always checking - they were organized - you know what's going on * They cared about me - it was how they talked - letting family and friends know I was there - staff was always there - touch made me feel better
I Will Be OK	* I will get out of here * I appreciate things

In the follow-up interviews, each of the participants was provided with a table of the four major themes and categories as well as a summary that included quotes to support the

themes. Participants then read the summary document. During the review of the themes and quotes, participants were noted to be nodding their heads ‘yes’ in agreement.

Comments from participants related to the four main themes included: *“Yeah, that’s so true. I agree with everything that’s in there” (Sue); “That’s what I felt! I did feel safe” (Bob); “a lot of things people are saying I agree to” (Brenda); “I think your themes are right on” (Francois).*

4.2 Theme 1: I Remember

Webster’s Dictionary defines the word remember as “bring back again to mind or memory” (1992). Each of the participants provided a clear and detailed account of the event that resulted in their ED admission and subsequent trauma resuscitation. The following sections will elaborate on the event that lead to injury as well as frustrations that some participants felt in the ED.

4.2.1 The Event

The memories and recollections of the participants, related to the event, occurred from the time of injury to their admission in a tertiary care trauma center. The memories encompassed the time of the actual MVC or fall and, in the cases of Sue and Mike, their assessments at a local rural hospital and subsequent transfer to the tertiary care trauma center.

Participants prefaced their accounts of the event leading up to the trauma resuscitation in a similar manner. Most memories of the event were preceded by *“I don’t remember...,” “last thing I remember...,” “I remember....,”* and *“all I remember....”* Memories recounted

by participants included mechanism of injury, and care provided by by-standers, paramedics, and firefighters.

Yeah, in the back of the ambulance where I would just go (gestures with hand his lifting off the bed). Airborne sometimes. (laughing). He knew – we need to get this guy there fast. Yea, there wasn't very many slow downs or stops, I can tell you that. I don't know, I can't tell you how many cars we passed because I'm trying to look out the side, look out the windows there. All I could see were just cars- all pulled over. Whoosh... ..flying down the road we go. No if, no ands, no buts. Carried me in the trolley, none of this stop at the registry thing. Whoosh... "He's got this, he's got that, he's got this and that." (Francois)

All I remember is yelling to the guys "Don't move me" – to leave me the way I was and call 911. Um, I remember them getting on the cell phone and calling 911. They were there within eight minutes. Within the eight minutes. They were approximately 40 minutes getting me on the board and getting me to the ambulance. I arrived approximately forty-eight minutes from the time of fall to entering emergency. (Sam)

Some memories were second-hand, based on what the participant had been told rather than true recall as illustrated by Georgette: *"I must have been unconscious a long time. And Ray (her husband) couldn't get me – he said I was screaming down on the lawn. Apparently my arm was all twisted."* The detail of the events that occurred in the rural hospitals for Mike and Sue did not appear to be key memories but rather it was the sense of security they focused on, derived from the knowledge they would be transferred to a trauma centre. Sue comments on her relief that she would be transferred to TOH and

suggested that she was comforted by the fact she would be sent to a center that she believed saw trauma every day.

I found it a little scary that in XXX hospital I only remember two people trying to care for me and get the doctor. And I was a little, a little nervous there and the reason that I was so nervous, and I know that it's not a big hospital and that they did the best that they could. I felt like I could be OK there if I wasn't very serious. I did feel, I don't like to say it because they are just people working their best in that emergency. I'm not sure if they have much trauma – they probably don't. So, so that part of it made me nervous. I knew that they would have anything I needed and I'm not saying they aren't good in XXX it's just that they don't have staff available. You know, they're not geared for all sorts of traumas every day of the week. (Sue)

There were intermittent gaps in memories of the experience as noted by the participants. These interruptions in memory resulted in the participants guessing, approximating, or providing a reason for their inability to remember or give precise facts when telling their story.

I don't remember the tube (CT) going in or – I must have passed out again. Maybe they were giving me, giving me medicine. Like I am telling you, I must have lost some pieces. It would have been fun in a way if, to, I guess get the view, must have somebody's permission before, to film that. And then to question the person. That would be interesting to know what they remember. (Georgette)

I remember them putting machines on me at one time but now I am not sure why. Yeah. It was still (pause), like (pause), I don't know, for some reason I don't know if it was XXX or if it was here. I think it was here (Ottawa) though. (Mike)

When referring to the time spent in the ED, participants seemed apologetic for not being able to provide a detailed account of the trauma resuscitation. Patients provided an explanation for any memory gap as being due to the effect of medications or loss of consciousness. Georgette comments: *“Because maybe I should remember more. I don’t know. I don’t remember there what happened most of the time. Of course I was probably heavily sedated most of the time.”*

4.2.2 Being Frustrated

Participants recalled a variety of experiences that occurred during the trauma resuscitation in the ED which resulted in feelings of frustration. Frustrations stemmed from events or actions outside the physical priorities of the resuscitation and varied with each participant. For example, being watched, based on the combination of constant presence of ED staff and police at the bedside, was a source of frustration.

... So, it was like relief when I got to the room cause there’s not a hundred eyes on you all the time. Like there are people coming in and out but when you are done on observatory (ED) I was right across from the desk. So, whatever I did they’re right across from the desk. There’s no privacy. And it’s not that I need it but I just felt like you’re always under their eyes. (Brenda)

Overall, participants appreciated being observed by staff but the frustration was born out of the belief that the watchers - the staff and, in particular, the police - were in fact judging them. This was intensely felt by Francois and Brenda, the only two participants in whom alcohol was an acknowledged element. Francois stated *“I bought a case of Canadian 12, put it into the front of my car”* and Brenda concedes she drank *“three to four*

beer” prior to driving and crashing her car. In Francois’s case, he had an unopened case of beer in the front seat and the bottles broke in the crash resulting in him having a strong odour of alcohol. Both felt they were being judged as drunk drivers and thus perhaps in some way responsible for their injuries. Police presence and being questioned by the police officer were a major source of these feelings. This was emphasized by change in tone of voice and banging on the table to punctuate the statement when re-telling the experience.

That cop was driving me nuts. I wish to hell that’s cops wouldn’t be allowed in there.

He’s asking me all kinds of questions and I didn’t know. Like he’s asking me “Get away” I said, “Go away. I’ve got no time for you right now, I’m trying to live, trying to survive.” “Well you smell like a brewery.” And I says “Well did you take a look at the front seat of my car because there’s a dozen beer smashed all over the bloody place.

Not one of them was open.” “Oh, Oh, Oh, well I never did look at that” (Francois is making a ‘goofy’ sounding voice as he imitates what the police officer said). “Don’t look at the obvious Mister.” (Francois has angry tone of voice). It’s stressful for – it’s not like I’m a bloody convict for Christ sake. I just got T-boned! (Francois)

Francois described the police presence as: *“being harassed by friggin cops”* and that their presence was *“a pain in the ass”* when they *“wanted to give me a breathalyzer and I’ve only got one lung.”* Brenda, during the second interview, suggested the frustration she experienced as a result of police presence was due to being questioned while encountering the unknown. Brenda comments:

Not knowing what’s going on, um, and that police officer there continually asking you questions and you’re trying to figure out what’s going on with yourself... that’s kind of the frustration that I found at first. But like the twenty, the millions of questions, and so

many people at first. And then once I realized what was going on, I was a bit better as the time wore on.

During the second interview, Francois expressed his frustration, at what he deemed inappropriate timing, having to respond to the admitting clerk's questions, when he felt his priority was trying to breathe:

You're being harassed by admitting clerks – get away from me. Like my wallet's in my pants... where are my pants? I don't know, you guys cut them off... everything's there... and in the wallet are the health cards – don't even bother me. Yep, she was asking me questions. Nice voice, though, but she was asking me questions blab blah blah blah. 'I don't have time for this' I remember telling her. I remember telling her cause the left lung was just about ready to go and collapse.

Although a major source of frustration, the police were not an exclusive source of feelings of frustrations, as expressed by Brenda:

Some of the nurses were really like, like really approachable. Where some of the others were like, they had no time for you. I didn't like that. Then again, I was thinking because I was the quote 'drunk driver' so, that's when I felt like they were punishing me kind of thing. And I didn't like that fact because I already know I did wrong. And I know that in a lot of people's eyes that, like I understand what I did. But, I felt like I was getting more prosecuted. In my eyes.

The other five participants did not express any sense of frustration related to being questioned by police or being judged by the nurse. It was not explicit if alcohol was the related factor in the frustrations experienced by Francois and Brenda.

Altered communication was described as a source of frustration for a few participants. Brenda alludes to the frustration she experienced trying to access a telephone to contact her friends: *"The phone is the only thing that really stands out. That I needed to contact somebody and it just seemed like they, they didn't want to give me the phone."* Georgette, a very pleasant and talkative woman describes how she felt being an intubated trauma patient and the frustration associated with not being able to verbally communicate:

Well, no dentures. And well, I guess I was bruised and half dressed, you know what I mean. Tubes coming out of your nose, coming out of your mouth. I had enough people seeing me. Never thought I was vain but I must be! ... I couldn't speak because of the that tube (ETT)... Very frustrating. It was very, very frustrating.... Well, me unfortunately I knew it (that she had 'bad veins') but I could speak to them to tell them not to worry that I'm used to this. Because of that tube I could not speak. Maybe I could of, sort of saved the person a little bit of aggravation if I could have told them. And, and this (left arm) arm has been broken before many years. I could tell them that. My husband never thought to tell them. He was nervous himself. (Georgette)

Changes in appearance due to the direct result of injury, for example bleeding from lacerations, as well as from interventions such as an NG tube, was the root of some frustration. Brenda articulated how she felt when she had no control over her appearance:

They didn't even clean up my hands or look at my nose like it was full of blood. By this time it was all dry and I felt like they should do more there. Maybe it's not as serious but just a little cleaning up, you know. I just thought it was weird that I stayed that way there for ten hours without having my hands washed or my face cleaned up. That really

bothered me. Then, being in the room and them basically cutting my clothes off. Them taking off my clothes.

In summary, the findings suggest participants' memories of the event were factually based and sequential despite some gaps in recollection. Frustrations expressed by participants were based on the a lack of fit between what participants felt were priorities of care and ED protocols, such as the process of admitting a patient to hospital.

4.3 Theme 2: I Was Scared

The second major theme identified, *I Was Scared*, captures the aspects of the trauma resuscitation that contributed to the participants feeling scared based on *Living through the shock and pain*, *Feeling alone*, and *Not knowing*.

4.3.1 *Living through the shock and pain*

A state of shock was a protective mechanism for participants. Shock temporarily protected them from feeling scared or being aware of pain. Brenda comments: *"But kind of scared. Really scared. Because of what I had just gone through in the accident. I was really more shocked than scared. In shock."* This is reinforced by Sue who pointed out *"You know you are in such shock and pain yourself at that time and you really don't pay attention and absorb everything."* Bob suggested the shock is the precursor to pain *"You know they explained to me that the reason I was starting to feel pain was the shock was starting to wear off. I didn't realize it was the shock but the shock was before the pain itself. The shock was wearing off and I was starting to feel things...."* Sam refers to shock as a feeling of being *"ecstatic."*

Both Francois and Sue recount a time when they were pain free and saw a bright light while they were in the ED. For both of these informants 'seeing the light' was a powerful and disconcerting event. In fact, Francois met with a priest during his admission in the Trauma Unit to discuss the meaning of his experience. Francois describes his experience seeing a bright light:

*I just felt a, what do you call it, a (pause) a, euphoria (whispers 'euphoria'). It was just like euphoria. I was in la-la land. Happy. Not stressed out about anything. Oh that was a strange feeling (Francois describing difficulty breathing). Because you know at that one point I had no pain. The pain was gone. It was just gone. And when everything went black the pain disappeared (pause) and then the bright light, really bright light. My eyes were wide open and I could see nothing. Nothing but bright bright white light. I felt no pain. None at all. And then when it started to clear, the bright light started to fade away. I could hear the voices again and then the pain came back. And they started working on my back again then, punching holes in there, and then I got some, and I got some air going into my lungs bypassing the diaphragm. It was quite, actually to be me, the guy sitting outside his own body watching this happen – what an experience and a half. Everything went black first. Then I saw the light. And my eyes were wide open, I know they were wide open, and then it's like I fainted or something like that and everything went black. Until everything went black. And when everything went black and then went like **BRIGHT** white, bright white like your welding white almost, like a helium arc light type of thing.*

Sue described, in the initial interview, the time in the ED when she saw a bright light as follows:

When I was lying on that stretcher in the emergency in XXX I almost, I don't know what happened, maybe blacked out or - I'm not sure what it was but it was almost like somebody was taking a snapshot of me. You know when you see a light from a flash - that is what I thought had happened. I saw a flash of light. It was, well I was a little nervous. You know maybe the policeman there and he took a picture for reference. But then again it might have just been (pause) shock or I'm not sure what. Almost like a big bright light - maybe they turned on a light; I don't know (laughs). Maybe I was having a very, very weird dream. Yep. Not very logical, eh? Just seconds. I felt, oh, dreadful. Dreadful. They maybe turned off all of the lights when they examined me and then turned them on. That's maybe what happened.

During her second interview Sue commented “*I could just see this flash of light and I really to this day I don't know what it was. I really don't know what it could have been.*” Illogical events and things not understood can contribute to an individual's feeling of being scared. Both Sue and Francois attempted to derive meaning or an explanation for ‘seeing the light’ – Francois sought understanding from his faith by meeting with the priest and Sue pursued a ‘logical’ rationale: the staff must have turned off the lights.

Shock, as a physical phenomena, was also described as feeling intense cold, a cold right to the core.

My whole body was really cold and then I was shaking. They just tried to calm me and warm me. I remember them just piling blankets on me and I just couldn't get warm. I was just shaking - I suppose it was from shock by now. (Sue)

Powerful descriptions of the pain of injury and procedures were expressed by participants. Descriptors of pain include words like: *intolerable, unbearable, sharp throbbing, excruciating, burning sensation, pressure, torture*. Equally as remarkable, by omission, was the fact that participants did not comment on the need for or lack of pain management. Several participants alluded to the fact that awareness of pain in the ED was positive as they equated experiencing pain with meaning you are alive. Francois comments “*Oh I knew the pain would continue but I was alive.*” Sue felt very strongly about how important it was for her to be awake and conscious of what was happening both to her and around her despite experiencing severe pain. In response to seeking clarification on why it was important for her to be awake during the trauma resuscitation Sue replied:

As far as physically, had I been given some medication to make me sleep I probably would have been better off physically because I was in such pain...I was in such drastic pain where I was, I was in more pain than you can imagine. I just, for me, there was a sense of ‘as long as I am awake I’m going to be OK.’

During a follow up interview eight months after her MVC, Sue acknowledges that she “*had a lot of pain everywhere*” and, reflecting back on the experience, still did not suggest a need for better pain management in the ED. In the end, the participants were trying to stay alive by living through the pain they were experiencing and experiencing pain meant they were alive.

Absence of criticism related to pain management during trauma resuscitation did not preclude participants contemplating extreme measures for pain relief. Francois begged for analgesic during bilateral chest tubes insertion: “*And then the pain came back. Oh, it came back (lots of emotion in his voice). That’s when I was yelling at Dr Y “Guys knock me out,*

please knock me out.” “Please knock me out, your killing me here” (pleading tone of voice). I remember saying that quite clearly to.” One of the most extreme pain management measures was expressed by Sam, a young street tough man not given to descriptive comments. The pain Sam endured in his legs after falling 60 feet out of a tree lead to his considering death as an alternative to pain and wanting his legs “*cut off*” as an option to enduring the pain.

Um the pain? It's an indescribable pain. It's a, um, it's, it's, I, I, all I can say is its, its intolerable. You just don't want to be, well to me I didn't want to be awake or I guess in other words I didn't want to be alive type thing because it hurt so badly. And it came to the point where I didn't even want my legs – like it was so – I was so sore from my waist down. Like cut my legs off or whatever just to get rid of this pain. It very, I really don't know how to describe to other than um, saying a tractor has run over your legs – that's pretty well the feeling. I've never been through a, like I've fallen before but a, not to the extent of, of hearing – I just felt like there was somebody below me with a handful of sticks and breaking them over their knee – that's the way my legs felt. And it just felt like nothing. I hit the ground so hard. It was unbelievable. Um, (pause) it just felt like somebody breaking sticks – that's the way my legs felt. (Sam)

Minimal procedural pain was described. What is not clear is whether the pain which originated from injury was so severe that the short term procedural pain went unnoticed or paled in comparison and therefore was not worth mentioning. The source of procedural pain included positioning and transferring patients on stretchers, as indicated by Georgette: *“My ribs. Every time I had to move for some test or something. Oh, it's excruciating.”*

Pain intensified by movement was also remarked on by Sue: *“Just the fact that they had to*

keep touching me and moving me (made the pain worse). And the pain at times was unbearable.” Mike expressed his discomfort as a result of having a NG tube inserted with this comment:

Oh – there was the thing with the throat. The one at the throat, that one hurts. Yeah – that one hurt on account of the collar. That the collar was pressing on me (gestures with hands how collar pressed on anterior portion of neck and how pressure from collar was felt on NG tube in throat) up against my neck.

Some of the pain of trauma is unfortunately the result of poor technique by staff, as exemplified in Mike’s experience with having a Foley catheter:

It’s just that, once I was in loads of pain - and that must have been after the tube first went down (gestures toward nose) and they had to put the dye in (contrast for abd. CT scan via NG) so they had to shut my catheter off. Well, they forgot to turn it back on. And I was in pain. ... The other nurse came back in she goes “What’s wrong” and the sweat is just pouring off of me. I said, “I have to go” and then said “I can’t.” So then she checked, you know, and they forgot to unblock the catheter after the scan, so she did and then I said “Thanks, now I can go.”

Although the procedural pain of trauma was often disconcerting, as expressed by Mike in the previous example, Francois suggests it is unavoidable: “*Um, it (the pain) got worse as they were working on me because there were certain things that they had to do that they didn’t have time to piss around with.*” Francois implies that given a choice between analgesic and life saving intervention the trauma staff correctly chose the intervention.

Participants described nightmares or flashbacks of the events that occurred as sequela of feeling scared and surviving traumatic injury. Francois clearly articulates the emotional trauma that began once he was in the trauma unit:

*I'm just starting to get over the, the, the physical trauma of it now. I fight pain pretty good through my head and I don't mean physical pain, well that I fight too, but the stress, the stress and a the nightmares of – I can fight those off big time. I just tell them (the nightmares) they don't exist. I'll see you in the real world – don't invade my subconscious. Don't crowd my space (laughs). Too many other good things got to go in there. Well, maybe I am a little bit different from other people you have interviewed (laughs). Oh, there it was definitively the physical pain. Yeah. Yeah. Yeah. Cause it, **that** was a whole new experience. The trauma of **emotional pain** came on my first night that I was up here (in trauma unit). It was intense. It was extremely intense.*

Although the nightmares may have come to an end for Francois once he returned home, during the follow-up interview he stated he continues to have flashbacks when he drives through the intersection where his MVC occurred: “Still to this day I – every time I go through that **frigging** intersection, at Convent Glen (laughing) – it's **whoaaaa** – the little hairs go right up behind my back like that (gestures to back of neck).”

Long after patients are home and safe in their own environment the emotional pain and fear may continue, as described by Sue:

I have nightmares about it – I still do. I still do have flashbacks and which I know is not necessarily a good thing. ... I have nightmares about it – I still do. I still do have flashbacks. And I'll tell you a little bit about an experience I had in past ten months here trying to get back at driving. ... I was in a small way I experienced the same thing

when I got behind the wheel – my body was just shaking in shock. Yeah. I had, I still can't drive. I just went around the block that one time and I haven't done anything since. ... They say that maybe I should consult some help. I'm just hoping that it goes away. I do. I just wake up in the night and there I am thinking about it. ... And I don't think that it is just anything that leaves your mind, you know, in a short few months, that's for sure.

Off tape Sue acknowledged that she is still very afraid to get in a car since her MVC. In addition, Sue described to the interviewer her experience sitting in the driver's seat of a car only a week ago – Sue described “*going into shock*” once again as she began to shake all over and relive the crash in her mind while she sat in the driver's seat.

Participants' feelings of being afraid led to their seeking comfort in behavior they might not otherwise reveal in public. Consider the following comment from Sam: “*(I was scared) that I wasn't man enough to take the pain. I could not, I was crying like a baby. You know, I've never really done that. I've never done that. I've always held in my fears and problems you know.*” Sam continues by saying that crying “*made me feel good.*”

Georgette refers to behaviour she reverted to as the result of being scared and in pain. Prior to the traumatic event Georgette stated she felt that moaning aloud was inappropriate behavior. However, when faced with the reality of her own pain, injury and fear Georgette said: “*...I learnt to, when you're sick and moaning to yourself, I used to think it was kind of babyish. It does help. It does make you feel better. It's true. You can let it out. Yes, it feels better.*” In particular it was Sam who talks about the release he achieved from crying – something he would not have allowed himself to do under normal circumstances in the past.

4.3.2 *Feeling alone*

Despite being surrounded by the many members of the trauma team, the experience was one in which participants felt alone and isolated at times. The individuals felt that they were on their own to ‘get through’ the experience. *“I felt sick. I felt um, scared. Um, I felt um, totally alone. Like I thought I was - it almost seemed like I was the only one in that hospital. That’s the way I felt.”* (Sam) Francois describes the experience as follows:

When you’re in a situation like that it’s, it’s not like you’re pre-planned going in for surgery type of thing. You’re, you’re on your own. That’s a very solitude position that you’re in there. You’re not on the team anymore. You’re a lonely tennis player.

Feelings of being alone and isolated occurred at both the physical and emotional level. Brenda felt alone in the ED and this feeling was compounded as she believed the ED staff was preventing her from contacting friends as she suggests in this comment:

*Sometimes it took a long time. Like the phone. It took them about six hours and all I wanted to do was contact someone to help (tearful). And it seemed like they didn’t want me to have someone there. For some strange reason, it might not have been but that’s the way I felt. Alone. Very alone... That was really the thing that bothered me most (having to wait for the telephone). They couldn’t let me get in contact with anybody. I was all alone and I hate feeling all alone. Made me a little scared ... Like I was isolated in this room and a, not having anybody I know around me. That’s isolation too. Like they’re all, there’s face **I don’t know**, you know. So I felt isolated and that because I didn’t have my girlfriend there or something so I was isolated. In my mind.*

Brenda was the participant whose interview seemed to revolve around her sense of isolation from friends and the feeling of being alone despite the physical presence of staff

in proximity to her at all times. Of note, Brenda was the only trauma patient interviewed whose injuries could be construed by staff as preventable. Brenda admitted to drinking and driving. The other six participants sustained injury from mechanisms that could be considered 'an accident.'

The sense of physical isolation resulted in Sue feeling alone when she was transferred to the Civic Campus (after the trauma resuscitation at the General Campus) and left to await admission to the ward in a section of the ED.

So they brought me here (Civic) and the thing I remember the most is they brought me in (to the ED at the Civic) to, it seemed like a lobby but obviously inside the emergency doors. I wasn't in an actual emergency room. It was kind of like a lobby. I was kind of scared there because there really wasn't anyone around.

The feeling of being alone was mainly described in negative terms. When participants described being alone they used the following words: *scared, feeling sorry for people who are alone, frightened, time seems longer when you are alone, having to ask staff to come see you* (it wasn't initiated by staff). These negative emotions associated with being alone were allayed if the participants saw staff present.

Scared is the thought (when you can't see your surroundings). You know you are in good hands but it's more comforting to know that there is all of them just talking to you or just to understand that there is somebody there. And maybe there was. Maybe there was always somebody there doing things like checking on IVs on me or checking, I'm not sure. It seemed that at times I would kind of look around and I didn't see them there – or I couldn't see them there I'll tell you one thing that I really - they had two cases that arrived at the same time and they did handle it quite well but there were

times were it was like “well, is anybody here” because they were, obviously they were trying to work both of us at the same time. To me that was the scariest thing just, you know, maybe there was somebody beside me all the time but I know when I was in that situation I was in such pain and not sure if I was going to be OK and, you know, couldn’t see hardly and but to me it’s very, very important that people – that there is somebody there constantly talking to you. You feel better. I’d say the biggest majority of the time I was but the odd time I remember they stopped talking to me or something and I’d get like frightened. ... They were very very very good and very quick and trying to reassure me. And there was only a few times where (pause) they go in and out? I’m not sure. It seemed like there was so many people there and then there wasn’t anybody there. (Sue)

4.3.3 Not knowing

Lack of knowledge, lack of experience as patients, the uncertainty of the extent of their injuries contributed to the development of this theme. Francois commented that he did not know if any trauma team member was initially in control of the resuscitation: *“You know, that feeling (of not being sure someone was in control) might have been for only two minutes long but that two minutes is one hell of a long time!”* Francois continued to describe how he felt during the trauma resuscitation by suggesting the sense of feeling lost in the ED environment was a universal experience that could happen to anyone at any age:

Ever get lost in the forest or being a little kid get lost walking around the block or something like that? Ok, so then it’s that feeling of knowing “Where the heck am I? Where’s my parents, where’s my Mom, where’s my Dad? Where’s my big brother?” That’s what it feels like. That it can hit anybody at any age. ... That you’re not the one in

control. You're just kind of hoping like hell that everybody else knows what they got to do as the individual.

The unknown may affect a patient's perception of time. Brenda echoed this sense of being scared as the result of the unknown and how overwhelming that can be in the following comment: *"I like to be in control and know what everything – you know I like to know what's going on all the time. And being overwhelmed by all these people and not knowing what's going on type of thing."* Trauma resuscitation was previously unknown to Georgette and left her unsure whether or not events actually occurred or were dreamt:

I think there's another one I says. I don't think I dreamt that but I think they cut me under the arm and put a tube in there ... but I could remember them cutting through me and I let it go... "well", I says, "yes, you have a drainage" something. "Well," I says, "Then I didn't dream it. It's true." I says "I think I, I don't know whether I dreamt it or what. Do you want to look if I have something under my arm (asking the nurse to check if she has a CT)?"

Procedures being performed on participants during trauma resuscitation were also a source of feeling scared as they did not know what to expect. Feelings of being scared were compounded in patients whose first hospital experience was the trauma resuscitation in the ED. Mike explains what it was like for him to have a NG tube inserted when he had no prior experience as a patient in a hospital:

I think everyone has to go through it for the first time like that. Like, that you know, so that when, when you go through it for the first time I suppose it's always the scariest if you've never been in a hospital before, I guess.... Except for when that thing has to go down your nose and down your throat. That one there I wasn't up for. But now I know –

now I know that for next time. Like if something ever, if I ever had to go through something like this again, now I know. It's only a matter of a few seconds and It's over and done. It was just the point of the first time my being in a hospital. That made it more difficult – no question. It was the hard part.

Mike comments on the 'expertise' he has gained through this experience and how it may serve him well in the future should he require similar interventions.

Lastly a fear of the unknown is derived from not being able to visualize just how seriously you are injured. It is much easier to appreciate the seriousness of an amputated limb as it is obvious to anyone who looks. Much more subtle and less obvious to the naked eye are injuries that are potentially life threatening, for example internal injury. Sue comments on one of her biggest fears – not knowing what may be happening inside her body:

That was one of the worst things because number one my biggest fear is: outside injuries you can see everything and you know what are the injuries but when you have internal injuries, to me that was very scary because of infection and stuff.

Francois goes one step further by suggesting that a look through an anatomy book would help him to understand what happened inside his body as the result of his injuries:

This I haven't got a clue what it's for (pointing to sutures on stomach). I haven't got a clue. All I know is I got opened up from here all the way down to there (pointing along suture line). I think they moved all my lungs out of the way to go and rebuild my diaphragm back there (pointing to incision line on back and to bilateral chest tubes). I'd have to look at a, at a Gray's anatomy chart to see what's what there – as to what's where on my body here and figure out what's what.

Despite experiencing feelings of being scared from pain and shock, feeling alone and not always knowing what was happening, participants explicitly stated that the overwhelming impression they had in the ED was feeling safe.

4.4 Theme 3: I Felt Safe

Two main factors contributed to patients feeling safe while they were undergoing resuscitation in the ED: the actual process of the resuscitation and the relationship between the trauma team members and the patient. The process of trauma resuscitation was interpreted by participants as efficient – they felt the trauma team members provided care in an efficient manner. Efficiency alone was not enough to result in participants feeling safe; participants also felt that the trauma team members cared about them as individuals. The dynamic combination of efficiency and caring by trauma team members created an environment in which participants felt safe. The findings centre on the efficient quick process followed by staff demonstrating caring.

4.4.1 They were efficient.

Staff efficiency was demonstrated through five main actions: i) everything went so quick, ii) they gave me confidence, iii) they were always checking, iv) they were organized, and v) you know what's going on.

Everything went so quick

The quickness of the staff, the speed of actions and the pace of care delivery made an impression on participants. Participants seemed almost surprised at how fast they were seen and assessed by staff in the ED. The incredulity at being triaged into a resuscitation

area was expressed by Bob, a patient who presented to the ED with a lacerated carotid artery and partially amputated ear:

*The immediate attention. I tell you, when I got off the ambulance I was dreading it. I'd been, you know, I thought, I thought I'd be put in an observation room and have a thousand people looking and deciding what to do and I was dreading the whole thing. So that may be one of the reasons that caught me so much by surprise that they handled it right away. No wishy-washy, no wanting to consult... what I couldn't get over was how once I got here they brought me into the emergency room and **right away**... I've been to emergency rooms with the kids for little things and you're waiting for hours and hours and hours, you know and stuff like that. I guess you guys prioritize things pretty quick.*

The quickness of the care, the speed of delivery of care was noted by many of the participants, for example in Sue's observation: *"I remember it being such quick action when they pulled into the General. It was almost like instantly there I was and there were all these people around me. And there were doctors and there were nurses."*

The quickness, in conjunction with the quality of the process of care delivery, promoted a sense of security in participants that they were in capable hands. Sam commented on the fact that the trauma team members were not only quick but they knew what they were doing: *"I think they knew what they were doing. Oh yeah. They'd have to, I would think. Everything's so quick eh. Just, just one of those things that they were in and out, you know."* Participants observations that 'everything went so quick' included urgency in timelines for definitive treatment. Sue comments:

I figure myself that if it was that quick then they, I mean they know how things have to happen and the timelines they have to know. And again I just felt that they just knew what they had to do and how long they had to do it.

Both Sue and Francois unknowingly comment on the basic tenet of trauma care, the ABCD's (Airway, Breathing, Circulation, Disability) when they recognize the priorities assigned to actions by staff. When Francois describes his experience as his lung was collapsing he articulates the trauma team's priority of the ABCD's rather than pain management:

*But I remember, I remember their saying, that I had a collapsed, a lung that was collapsing or something like that and a diaphragm that had detached completely. And I remember telling myself "Oh boy, this is good, this is good" (laughing) ... Well, the way I look at it is they **did not have time** to wait for drugs to kick in. My diaphragm had collapsed, I had a hole in my lung, I was filling up with fluid, my chest cavity's filling up with fluid – this man is going to **die**. Do it!*

Sue had sustained a serious injury to her lower extremity and recognized early on that the speed of her care was driven by the need for urgent surgical intervention:

But their main goal there was that 'We don't have many hours here to get that cleaned (meaning fractured ankle).' So that was like the number one thing so on goes the neck brace and they decided that this leg had to be done as soon as possible. And they told me that they had no operating time so they were getting me over to the Civic as soon as possible.

Participants had a general sense of movement as the following comments suggest:

Busy. They were busy. Well, you know, they just don't stop... Busy little spot down there (laughs) having all these people moving all around you. Like it quiet in this area up here (referring to trauma unit). Like down there (in the ED) they are constantly moving around. You've got them here (gestures to right side), here (gestures to left side), here (gestures to foot of bed), and here (gestures to head of bed). (Mike)

I mean everybody is rushing taking care of you and trying, you know, trying to do their best to a ... Everybody's so busy... and I've never seen busy bees like that. You know what I mean? I just can't believe how busy they are... I've never seen it before, action like that. (Georgette)

Francois suggested that the movement was so intense that “*Well, the adrenaline, the electricity that was flying around in that room – I could literally see it... The team was moving so fast. Reaching so fast that it was like a centipede – all the legs were moving at the same time...* ”

They gave me confidence

Despite the fast pace of the action in the ED participants felt that the staff were able to convey to them a sense of confidence that they were being cared for by expert practitioners, as Bob comments: “*I was filled with the confidence that I was in good hands,*” as well as confidence that staff were in control. Bob further suggests that the confidence in the staff is established within the first few moments of arrival in the ED:

So maybe I might have been looking for the reassurance. And you know, I got it - the first person who came to me, you know. By the way they transferred me from the gurney

onto the table you know. You know 'safe' is a very important thing to feel when you're in a situation like that.

The perceived expertise of staff in a trauma center inspired confidence in the participants. A belief that staff in a trauma center dealt with traumatic injury on a daily basis was a comfort to participants as it meant they had the expertise to manage their injuries with skilled technique.

You feel a sense of security in the emergency room when you know they have the trauma team there and you know you have the best help is there waiting to get you through the situation as they do it every day. And I guess, just (pause) in the end you don't feel insecure. Being in the emergency room where you know, finally, you are going to have all of the equipment there, all of the expertise there, all of the tubes, you know there is so much stuff and you know the staff deal with this every day. And it gives you security that you're in the hands of people that are really good. (Sue)

Bob corroborates Sue's comment with the following: *"Obviously they've seen this before and they had done this over and over and over again. If there was anybody new it didn't show. So I think it, it mostly seemed to be they knew exactly what they were doing."*

An additional way in which staff instilled a sense of confidence was by actively engaging in communication with the participants. Francois felt that the staff would keep him safe because:

*I felt listened to. When I would say, like, "Oh it hurts" then things would change. A different approach would be done or it would get done **faster** so there would be less pain. That's basically the only control I had in there because, they, what I did basically*

is 'I'm in the palm of their hands here' – they can either open it and let me fall or close it and keep me safe.

Sam suggests that the staff gave him confidence by handing over his life to the staff with his simple observation: *"I was in their care. They, it was all up to them to fix me up."*

They were always checking

Feelings of being safe were reinforced by the trauma team members continually checking the participants. For example, they were checking for injury, checking with colleagues, checking for veins, checking personal belongings. Sue describes her initial assessment at the trauma center:

When I arrived at the General they were totally assessing all over to make sure to themselves that "this was not broke, that was not broke, possibly this is broke." I can't tell you who they all were but they were all just checking things and prodding me and feeling different parts of my body and checking for broken bones... They had to assure themselves that there weren't any other injuries that had to be dealt with.

Bob's experience of the initial assessment parallels that of other participants:

A ton of people – let's face it, I couldn't move around to see who – but the ton of people and they went right to work and they they put me on to the table ... and a did all the checking.

Assessment for potential internal injuries was as important to participants as the staff assessing the more obvious external injuries. Brenda comments: *"... Well, like when they said, "Now we're sending you to x-ray." So I know "OK there's something inside me they're checking." " They're checking inside me."* Ongoing assessment is alluded to in

the following comment: “...*always checking if your, if your things are not leaking...*” (Georgette) and “*So they’re investigating. So that’s fine. And when I came back they’re waiting for the X-ray. Then they look. Then they’re sending me to CAT scan.*” (Brenda)

They were organized

Central to participants feeling safe during trauma resuscitation was the belief that the trauma team members were operating in an organized manner, that there was a process that was followed. Francois noted that, despite a large number of staff involved in his resuscitation, each had a role:

You know, I remember a, oh, it must have been let’s say one, two, three, four, five, six, seven people working on me. They all had different jobs. They were all doing different jobs. All of them. They were all doing different jobs. One was taking my boots off, pulling my pants off, someone was a cutting my coat off, others were starting to air me.

Distinct roles for each of the trauma team members were clear to participants. Sue commented: “*I never ever heard one person say to another ‘Hand me this, do this, do that’ (uses stern tone of voice when saying this). It was almost like everyone knew where their place was.*” The role of trauma team members was also noted by Francois: “*The head trauma nurse. Like those two have got to work in such teamwork because the doctor won’t tell, he doesn’t have time to tell the other nurses what to do. He tells this one and this one takes control of the nursing staff.*”

Efficient teamwork has its roots in a well organized system. Bob reflects on how organized the trauma team members were and attributes this to a deliberate matching of personalities on any given team. Bob commented:

I don't know if you guys work at making sure the staff knows each other. I don't know if whoever does the scheduling looks at each other's personalities and tries putting, matching people's personalities together. I don't know if they do that. If they don't do that then I lucked out the day I was there. I would, you know, I would like to believe it was by design.

Mike suggests the organized approach resulted in the trauma team members being in control: *"Well, it was what they (trauma staff) said. It was how they operated. It wasn't scary. They were in control of everything."* Staff in control was acknowledged by several participants.

There was a guy in control. It goes back to that same, there was one man – or woman, it wouldn't make any difference to me, in control. There was one commander. Not five little chiefs and two little Indians. No, there was one commander and everybody listened. Like the head trauma surgeon or whatever you want to call him. What made the experience easier? The only thing I can think of is that there was somebody in control. (Francois)

Bob confirms this in the following: *"The fact that they were in control gave me a luxury of not having to worry about a lot of things."*

You know what's going on

Lastly, participants indicated that staff did their best to keep them informed and let them know what was going on. Prior to the trauma team members' arrival at the bedside, the emergency staff let Bob know that the team's arrival was imminent: *"There was a lot of people there. They let me know there was going to be a lot of people there."*

Trauma team members were able to simultaneously provide physical care to patients and convey relevant information pertaining to treatment and status. Georgette describes the importance of staff informing her of how they would reposition her in the bed:

Like when they move you up in bed they will all say "Together on three we move up" or, and they tell " You're turning to face me" or "Going there" and, if they tell you everything you're not left in limbo. You know what's going on. That's good.

Francois comments on how the staff let him know what was going to happen to his personal belongings after his clothing was cut off of him: *"Being told that my personal property was being taken care of and all that stuff, a that was important. Like I didn't want to lose all my documentation. My keys and all this stuff I didn't to lose any of that."*

Francois derived some measure of comfort from knowing his personal possessions were being secured; thus he had one less thing to worry about. When time allowed, trauma team members took the time to let participants know what they were about to do. Mike describes being scared at the thought of having an NG tube inserted yet the staff explaining the procedure to him, as they proceeded, decreased his fear:

I mean, they talk to you and together and that way they don't just grab you and say this is "Oops" (making gesture of NG insertion). They go "We are doing this" and OK. But for the first time it's all scary though I know (pause), I know now.

Trauma team members gave participants clearly stated tasks to focus on such as *"Keep breathing"* or *"Swallow"* during NG tube insertion. As a result of being given a task, participants felt they then became a contributing member of the trauma team. In the second interview Francois commented:

*They always kept me informed... That's a positive, that was a very positive reassurance for myself that I was part of the team getting **me** better! You know, I'm not just standing on the sidelines. Basically my orders were "Keep breathing, keep breathing." I had to focus on, I had to focus on 'Keep breathing.'*

Staff kept participants informed of the events unfolding around them through indirect methods. Participants were aware of and commented on the communication between trauma team members. Familiarity between staff suggested to participants that they worked together often and this contributed to their ability to provide efficient care.

*They all communicated with each other by their first names. However, at the end I was kind of glad first names sounded like last names, you know what I mean. If someone was being called by last name or they didn't know, you didn't get the feeling they were familiar with each other, um, because I know how serious it was. It was important to me that they communicated by first name – sometimes even finished other's questions and sentence! And they started talking and they were able to **look at the direction** and they didn't need to finish all of it because the other person knew right away what the other person was saying. You know, nobody had to do any repetition or repeat anything.*
(Bob)

Direct communication was also cited as an important method employed by staff to assist patients in feeling safe. Sue sustained serious orthopedic injuries which necessitated her being transferred for urgent surgery. Sue describes the staff informing her of the impending transfer:

And then there was, I not sure who was on call that morning, but a doctor came in to look at me, and there were at least two nurses who were very concerned and they said

that the case was too serious for them to handle. The staff are being more straightforward like “You have a fracture.” They are really straight straight straight straight.

The honesty of the information fosters a sense of security in patients. The open exchange of information between staff and patient allowed participants to feel secure in the knowledge that staff was treating their injuries very seriously. Bob comments:

*So they brought me in, they put the oxygen on; I guess they put me to sleep. They let me know what they were doing – they talked openly about what they were doing. They didn’t try and hide anything from me. They let me know how serious it was. You know, and a, I **knew** – but by them telling me how serious it was I knew then that they were going to **treat** it as serious. So a, I was never in fear....*

4.4.2 They cared about me

Participants’ belief that staff cared for them on a personal level rather than from just a clinical perspective was unanimous. Trauma team members demonstrated caring behaviour through how they talked, letting family and friends of patients know they were in the ED, always being there, and the use of touch to make patients feel better.

It was how they talked

Tone of voice of trauma team members had a significant impact on participants. “*It was just the way they talked – the tone of voice. There was, even though they were matter of fact it wasn’t cold.*” (Bob) Patients derived a sense of caring and compassion from how the trauma team members verbally communicated with them. Of lesser importance was the

content in the verbal message. Georgette comments that the soothing voices of the staff made her feel that they were not simply ‘doing their job’:

But it was whoever was asking me the questions had a nice soothing voice. It was nice. You know, it was, ah, you could tell he was not just doing his job. It was nice... I didn't think I was going to die or stay immobile or something. I didn't think that very much. I believed what they say. I believed the way they said it to me. That had a lot to do with it... Well they said it not like in a business way, if you know what I mean. I mean, their voice had, I don't know if this is right, "atonements." Or, like they had feelings.

The expertise of the trauma team members is defined by their ability to provide efficient clinical care while simultaneously conveying compassion. Bob describes how the trauma team members were compassionate:

*Just by the tone of voice they used. There was no hysteria. There was no, a, sometimes you meet people who do their **job** and they're matter of fact and cold and these people were matter of fact but they weren't cold. It was just the **way** they talked. The **tone** of voice they used.*

In addition to a soothing tone of voice, reassurance was centered on participants' ability to focus on one voice as well as repetition of encouraging phrases from staff. Francois comments on being able to focus on a single voice:

*But there were just voices and all I could hear was **the voice of the Captain**. And he was just barking out the orders and everybody was just doing what they had to do.... I focused in on the Captain's voice... Cause I'm kind of familiar with the military lifestyle where everything can be in chaos, sixty guys running around on maneuvers not knowing*

*what the hell is going on – and then you hear **the one voice** and all of a sudden all sixty turn around, and they are behind you, and off they go. That's what it took. The trauma team leader there, he's the ultimate – he's the guy or the girl. The person.*

Repetition of encouraging phrases by staff was described by Francois as:

*A motivator. It's like the old, that old thing about the little train that has to go up the hill. There is no "No I can't. No I can't." It's just "Yes I can, yeah I can, yes I can, yes I can." You know what I mean. And that a, that a being told "You're fine, you're doing OK, keep it up, you're doing just fine Francois" – that keeps your life line open. That keeps you hanging on to that rope. You won't let go of that rope... I was getting constant reassurance. I was getting "C'est correct Francois, ca vas bien," "Continue Francois," "You're doing fine Francois," "Keep going Francois." Oh, hey, **that** brings you up the ladder. Brings you up the ladder and makes you go (makes sound of gritting teeth and mumbling) – you know, the old 'grin and bear it' thing. Makes you do that. Definitively.*

Sue recalls staff reassuring her by how they talked: *"They just kept saying, "You'll be all right. You're alright.""*

How staff communicated with each other as well as with the patient was a source of comfort. Bob reflects on how staff speaking with each other, and with him, without shouting was reassuring:

*They (the staff) **talked**. Mostly they communicated. They asked questions. Yes, I understood they had to do that to see if I was doing good, which means they*

communicated, and they let me know what was going on. They communicated without shouting. I can't say enough.

Brenda reflects on how caring was instilled when staff responded in a timely fashion with action that corresponded to what they said they would do:

Like say I ask for a drink of water or something, some of them are like "Oh yeah" and push you away half an hour and another one would be nice enough "Oh yeah" and go get it and come back. Yeah. Cause then they showed me they cared more.

Both Bob and Francois commented on how the use of humour demonstrated a sense of normalcy and caring. Francois recalls staff joking with him: *"I remember one of his comments to - he says "my nose was to big to fit inside the mask." (laughs) Imagine that (continues laughing). A little bit of satirical humour in the middle of this here."*

Letting family and friends know I was there

When staff let patients' family and/or friends know they were in the ED, they established a sense that they cared about the patient as an individual. Of interest, the desire to have family and/or friends at the bedside while participants were in the ED was divided by gender. Male participants suggested they did not want family at the beside during the trauma resuscitation. Mike revealed having family at the bedside might compromise his care as their physical presence might obstruct staff access to him:

Well, what if the nurses and doctors had to do something quick and they were there in the way. They would be in the way. I mean, it's like my own job, like I don't want someone around me, you know, people coming through when I have something I have to do. That's it.

Mike comments that the time to see family is after the resuscitation:

I'd be more happy to see them (parents) after the fact than before, really. I don't think I would have wanted them to see me before the fact. I think it would give them more of a scare then, you know. It wouldn't have made a difference with them being there.

Francois explicitly stated his preference for not having family present: “*Oh no! My 81-year-old mother, no way! Nope. No way. My girlfriend. Yep, maybe Julie but that's about it.*” Bob was preoccupied with his children's well being while he was in the ED yet he was content having staff communicate with his children on his behalf by telephone.

Female participants indicated a desire to have family and friends aware of the fact they were in the ED as well as deriving a sense of comfort from their presence. In particular, female participants indicated that staff demonstrated caring by facilitating contact between patient and family or friends, whether it was contacting individuals on behalf of the patient or bringing them to the bedside. Georgette suggests she was comforted by the fact that a person familiar to her was nearby: “*Having him (her husband) there helped. I was glad to have Ray there and, a, and I felt I wasn't afraid. ... They just give me a feeling of somebody that I knew, was known to me was there.*” Sue describes the role of family as providing comfort: “*Oh, it was wonderful (seeing family). It was wonderful. ... When I am with my family, um, they would protect me by saying, “You're going to be all right. You're going to be all right. You're going to be fine.”*” Brenda concurs with the other female participants by commenting on how familiar people are a source of comfort in unfamiliar circumstance “*Just to have somebody know I was **there**, to know I was in the hospital and I guess I needed some comforting, you know.*”

Staff was always there

Trauma team member presence was a source of comfort and caring for participants. The large number of trauma team members was reassuring to participants. Bob comments:

Well, tons of people were around me all the time – now mind you that’s what I felt. I don’t know, there may have been only eight or nine, I don’t know, but there were a lot of people around me. ... They warned me there was going to be lots and not to be concerned. And a you want the truth? I felt important. (pause) ... They made me feel important. I felt that they were treating me as if I were important.

Patients who have experienced a serious injury intuitively know they are critical and the resultant trauma resuscitation acknowledges that fact. Patients are reassured that staff do in fact care about them and are treating their serious injuries with the importance they require. The constant physical presence of staff was a very low-tech means of indicating caring and reassurance to participants. Francois commented: *“There was always two right with me all the time. The head trauma nurse and Dr Y was there. They were both there all the time. I don’t remember ever not being able to turn my face and not seeing their faces.”* This was reinforced by Sue: *“Staff are competent and there. There. Well you know, someone always there. To have someone sitting there and being there.”* And Mike: *“They surround you constantly.”* Bob sums it up best with his simple observation: *“They a (pause) they were there (voice emotional when he says this and he appears emotional).”*

Touch made me feel better

While being present at the bedside, trauma team members confirmed they cared about the participants through the use of touch. During the course of clinical care, staff

purposively touched patients in order to assess and complete necessary tasks, such as inserting a NG tube. A non-purposeful touch was remarked on by participants. Touch that conveyed caring and reassurance was an essential component of participants feeling an overriding sense of being safe. The following comment from Francois suggests touch as a lifeline – through touch; trauma team members give their energy to the patient who requires this energy to survive the injuries:

*It's a lifeline -- touching you -- you're drawing energy from that person. You're drawing energy from him or her -- it doesn't make any difference. If your energy is like down here (gestures lowering hand below height of bed). It's like my kids -- they get sicker than little puppy dogs and I got them all bundled up on me like that (gestures hugging kids close to him). Half an hour later they start feeling better. Cause they'll suck the energy right out of your body. And that's important they're willing to give me that energy to keep me motivated. And at the end there I bet you, I bet when they were finished with me, I'll bet you **some of them were pretty drained out**. Yeah. Oh yeah. I'll bet some of them were **pretty drained out**.*

Sam describes the comfort he experienced as the result of staff constantly touching him:

What I could remember there was always somebody at each shoulder. I can remember that. There was somebody at each shoulder, grabbing my shoulders. Or rubbing my head, or always rubbing a part of my body. Um, just comforting me. Making me feel like everything's going to be OK and that was a big thing to me. It was very comforting.

Georgette likens touch with reassurance in the following comment: “*Rubbing your brow. Um, ah, rubbing your arm and encouraging you that it is going to be better.*”

The use of touch had a calming effect on patients and allowed them to relax. Brenda's experience in the ED was one in which she felt the staff were judging her as the proverbial 'drunk driver' and yet staff were still able to demonstrate caring behaviour through the use of touch. Brenda reflects:

It (touch) makes you feel better. It makes you feel relaxed. It's calming. Um, I don't know, it just calms me. It calms me. It calms me. It just makes me feel like you care. Like putting that extra little bit in, you like not anything, just like a little touch. Just sort of makes you feel relaxed and calm. And cared for.

4.5 Theme 4: I Will Be OK

Participants completed the story of their experiences of trauma resuscitation in the ED with reflections and resolutions for their future, moving full circle towards optimal post-injury family and work life. The final theme that evolved from data analysis was *I Will Be OK*. The two main aspects of this theme were participants' sense of certainty that they would survive their injuries beyond the ED and that the experience provided them with an opportunity to reflect on what they truly valued in their lives. Despite having been severely injured, patients were able to look forward to the future, to their pre-injury life, with the belief that they would get out of the ED. Overall; the experience was a positive one. For example, it gave patients a sense of a new appreciation for what they felt was important to them in life.

4.5.1 *I will get out of here*

Throughout the trauma resuscitation, participants believed that they would survive their injuries beyond the ED. The assertion that they would get out of the ED, and subsequently

out of the hospital, was philosophically and spiritually based. Georgette suggested her approach to trauma resuscitation as something that was “*part of the process*” to enable her to return to her pre-injury life:

Well, just knowing that it (pause) I was going to get out of there. You know, and it was part of the process. I had to be in there and (brief pause) Do you know, I wasn't scared. That is surprising. I was not scared (pause). To me you feel calm. It has to be done, it has to be done this way and that's (brief pause) that's the way it goes.

This philosophical outlook precluded feelings of being scared, allowing a sense of safety and the resultant belief they would be OK. The belief and confidence that trauma team members were doing their best to resuscitate the patient made the experience easier to cope with: “*No. It wasn't difficult (being in the ED). You know, I'm old enough to know that I was there for a reason. And everybody was doing their best. I didn't think it was difficult.*” (Georgette)

Personal strength and will could be attributed to participants' belief that they would get out of the ED: “*I've got a very strong will to live.*” (Francois) A sense of family was a key motivational factor in participants' belief that they would get out of the ED and return to pre-injury life.

Strong sense of family and strong will to live. A, first of all the will to live is the biggest. The will to continue, the will to be able to be with my family. You know, cause it's fine to have a strong sense of family, but you don't have the will to live, what's the point... My health is priority over anyone in my family's health because I'm (emphasis on 'I'm') the one who has to do everything for them. (Francois)

In the course of the second interview, Bob suggested that his children were his motivation for overcoming his injury and so he made the choice to survive and the staff helped him achieve his goal. *"I made the conscious decision, you know, my kids needed me. I'm not going to die. I made that decision. Yeah. But that decision I made was reinforced. Each step I went it was reinforced (by) staff."* Again, inner strength and will to live had a key role in participants' belief that they would be OK.

One participant, in the second interview, simply stated *"I never ever felt that I wouldn't be OK"* (Sue) suggesting that when seriously injured an individual must believe they will be OK – it is not a choice. The certainty that they would be OK was fundamental to participants' beliefs that they would be OK.

I knew how (pause) close I came (pause) and I knew how, you know, you know, that's pretty damn scary – I came close to dying you know, but, a, um I also knew I was going to be OK. I knew without a doubt there wasn't a 95%, not at 99.9%, I was 100% sure I was going to be OK. And that's a nice feeling believe me! (laughs) So I didn't have the panic. (Bob)

The belief that they would be OK reassured patients and therefore lessened the likelihood that they would exhibit any lack of control or panic-type behavior requiring intervention such as being restrained. Bob goes on to say his belief that he would be OK was a direct result of the interaction with the trauma team:

When I knew I was OK – and it's hard to tell why I knew it, but I knew the moment that they started coming around and checking me and that, I knew that I was going to be OK. I knew it with a surety, so it was easy for me to be in control of myself. I felt no panic. I wasn't afraid for myself. I knew, I knew a surety even though you know – let's

face it; you can see the stitches. ...I can't say enough about the staff in the trauma room here. And I, um, I, I felt, you know, regardless of how much blood I was losing I felt like I was going to come out OK. You know, a confidence they gave me.

This comment highlights the influence that trauma team members had over patients' perceptions of the experience. The confidence inspired by staff contributed to participants' conviction that they would be OK.

Faith contributed to participants' belief that they would survive their injuries well beyond the ED. Expressions of faith were explicitly stated by participants. Faith is unwavering even after sustaining a traumatic injury. *"I still have faith. ...I'm not a church going person. I do believe there is a Spirit you know."* (Georgette). In the second interview, Francois was very forthcoming about his belief that his guardian angels saved his life:

How close I came to death...It gave me another realization that I'm not afraid of dying. ...I think there are a few guardian angels up there grabbing me by the collar. ...I'm sure of it... There was some kind of force out there that grabbed me from one side of the car and slide me over or something – I don't know – cause I felt my ass move over to the right hand side of the car.

4.5.2 I appreciate things

The experience of trauma resuscitation in the ED provided participants with an opportunity to reflect on their pre-injury lives and look forward to their post-injury futures. The seriousness of potentially life threatening injuries was a wake-up call for many of the participants, with the exception of Mike and Brenda.

Overall, the experience was the basis for a new appreciation for life, family, friends and others. Pre-conceived notions of health care providers and the health care system shifted as

a result of participants' experience in hospital. Francois states his ED experience *"really opened my eyes to what they do"* when referring to the ED staff and trauma team. Bob, whose interview was peppered with comments suggesting surprise at not having to wait several hours to be seen in the ED (despite having a lacerated carotid artery), expressed a new appreciation for the ED triage system: *"And a next time I'm here and I have to wait for two hours for something like a stubbed toe or something I think I'll appreciate it."*

Georgette implies that her experience was a positive one: *"Yeah, it was an OK experience I think. ... I'm not sorry I went through it. It opened my eyes to hospital people. It opened my eyes to all that they give of themselves."* The sense that the experience was positive is endorsed by Sam: *"Now, if you could call this a good experience, I would call this a good experience, you know what I mean, even though being sick but meeting all those people and (pause) it was good."* There was an intangible quality to the experience of trauma resuscitation in the ED that turned a potentially negative one into a positive episode in participants' lives.

A new, or renewed, appreciation for family and friends was evident in participants' narratives. Sue referred to her husband in the following comment: *"You know I love Chuck so much I was like – you know when something like this happens - you don't ever realize how much."* The renewed appreciation for life continued after discharge from hospital. During the second interview, several months after the experience of trauma resuscitation, Sue comments: *"Everything means a lot more to me now."* Sam reflects on his past relationship with his parents and how the trauma experience provides hope for a new future: *"It's been, it's been quite an experience (pause). Like my father and I - we were never really close before this either and um boy this really, it's really brought us*

together.” Sam continues by reflecting on how relationships with friends are renewed after sustaining serious injury:

You know it been, it's been, you know who your friends are and I've got a hundred friends that I never knew I did, you know. Just that I think they were, I just think they were afraid to come near me or whatever because I was, I was always so grouchy you know. But I guess that's the way – it's funny how things change people.

As a result of the realization of the fragility of life, it is viewed through a new lens. Expressions suggested a renewed appreciation for self and others. While describing his near death experience, Francois understands seeing a bright light as signifying a need to change his priorities:

I don't know exactly what it means but it (it refers to seeing the light), what it did was it is pushing me in one direction now. Reassignment of priorities. Ah, readjusting my lifestyle. I'm not going to be working no six, seven days a week no more. That's it, no more of that. ... My own attitude has got to change. No more of these late nights ... The way I am going to run my life from now on. Yep. Yep. Change an awful lot of things in my priorities.

This sense of becoming a different person as a result of the experience is reiterated by others. The experience of trauma resuscitation is credited as being the impetus for allowing participants to become better people. Sam comments:

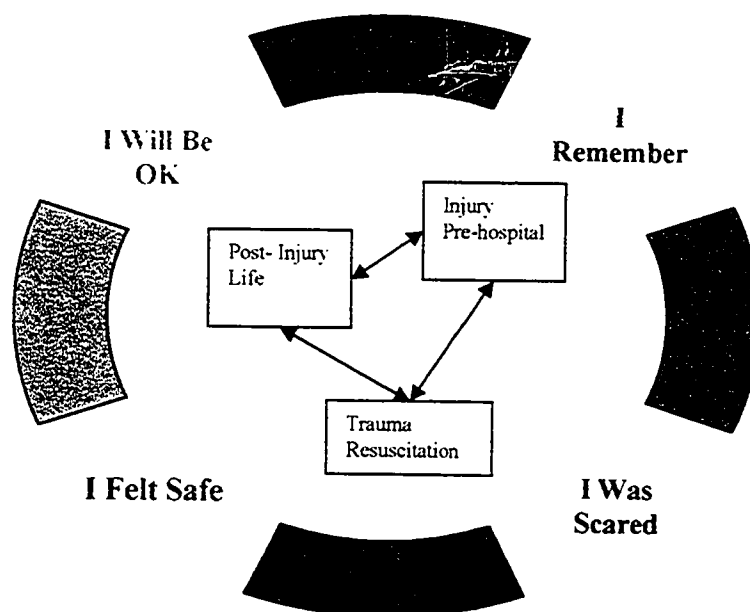
I'm a totally different person from this experience (pause). Big time. Like I think differently. I talk to people differently. I, a, I approach people differently. I, just everything. Talking to people on the phone. Talking to my parents. I totally appreciate

everything. It's been a really – it been a bad experience for my body but it's been a good experience for my body. It really has. It's made me appreciate life big time (pause). Before I didn't. I just took everything for granted. ... So I think this is not the best experience but it's been maybe it's been an experience that maybe my mind -- that's what it takes to make me a better person. (pause) Um, works in mysterious ways.

Neither Brenda nor Mike commented on a new appreciation for life as the result of their experience of trauma resuscitation during the initial interview. In the course of a follow-up interview with Brenda, she did allude to positive changes in her life as the result of her experience of trauma resuscitation: “*So it's a change now – he's back cause I scared him as much as I scared myself. So everything's worked out for me...*” Brenda suggests that her MVC and resultant experience of trauma resuscitation were directly responsible for her reconciliation with her fiancé and a new appreciation for their life together.

In summary, participants described their experience of trauma resuscitation in the ED as one in which they moved between looking back at the event and pre-hospital time and looking forward to being OK and subsequent return to post-injury family and work life. Figure 1 is a schematic representation of the participants' descriptions of the experience of trauma resuscitation in the ED.

Figure 1 – The experience of trauma resuscitation in the ED



The trauma patients' experience begins with a mechanism of injury, the event, and moves full toward optimal post-injury family and work life. This visual representation of the participants' experience of trauma resuscitation in the ED reflects the transition from being scared to feeling safe. After describing their experience of trauma resuscitation, participants were asked to describe the word vulnerability and whether they felt vulnerable in the ED.

4.6 Perceptions of Vulnerability

As participants were finishing telling their story to the researcher they were asked: "What does the word vulnerability mean to you?" The responses to this question were initially negative. For example, one participant stated "*I don't like that word*" while another ignored it altogether. In addition, participants' non-verbal communication

reinforced the suggestion that they were uncomfortable contemplating the meaning of the word. Male participants visibly reacted to the question by averting their eyes or tensing up. Some of the descriptors used by participants included *“all by your lonesome,” “not in control,” “left at the hands of the staff,” “open to attack,”* and *“helpless.”*

Further exploration determined that participants did in fact experience feelings of vulnerability during trauma resuscitation despite their initial responses. Vulnerability began at time of injury: *“I felt very vulnerable two minutes after the car got hit”* (Francois). For some participants vulnerability was experienced when they first arrived in the ED. Francois comments:

Vulnerable. Vulnerable is basically a word I should have used to describe coming in to that thing when you are all by lonesome. Yep. When you first go in there your all by you’re lonesome and you’re extremely vulnerable. ... Well, you go in; you don’t know what’s going to happen to you. ... You’re scared. You’re literally scared because you’re vulnerable. You could just drop dead right then and there!

Sue commented that dependence on staff contributed to feelings of vulnerability: *“You’re sort of at the hands of all the staff there and so you do feel vulnerable.”* During the follow-up interview, Sue suggested vulnerability is something that everyone experiences: *“I think it is just something that people are going to have to experience. I don’t know what you (staff) could do about it. ... I think it is part of the process.”*

During the second interview, Brenda’s interpretation of the meaning of vulnerability had altered to one connected with dependence on trauma team members. Brenda’s revised definition of vulnerability was: *“It means being hurt and letting somebody else help you.”*

Like you're vulnerable to that person's help." Vulnerability as dependence was also described by Sam:

I was left at the hands of the staff of the emergency room. I was in their care. That's how I see it. ... I was like a little kid coming in to nursery school. That's how I see being vulnerable. I was at their care – I was in their hands.

Some participants suggested being vulnerable is the process of losing and later regaining control. "... *To me when you're vulnerable you're not in control about nothing! You're not in control of your emotions! You're not in control of your forward or rear momentum. You're not in control of nothing when you're vulnerable.*" (Francois) During the second interview Bob commented that vulnerability is linked with control:

Vulnerable... You don't control your own destiny. ... I couldn't take care of myself. I had to give myself to their care – my care to them. I had to trust them. ... So vulnerable, yeah, I would say I did not have control of the outcome. ... I put my health in their hands.

During the second interview Bob reinforced the connection between vulnerability and control. Bob comments: "*I put my destiny and control in the hands of professional. And to me that would make me vulnerable and that's what I want. ... I wanted them to save me.*"

Once in the ED and after trauma resuscitation began in earnest, vulnerability began to dissipate. As participants begin to realize they could depend on trauma team members during the resuscitation vulnerability receded. Francois comments:

Vulnerability starts disappearing because once you realize that the trauma team is working and doing what they got to do you don't become vulnerable anymore – you

become dependant. But then it goes into a feeling of relying on this person. ... You start relying on them and then the vulnerability basically leaves. You become dependant. There's not much difference between vulnerable and dependant. With vulnerability it's the scary part. Dependant is not scary. Being dependant on somebody you're not scared, you're not scared. But being vulnerable – you're scared.

The perception that participants are only vulnerable in the early phase of the trauma resuscitation is due to the fact that trauma team members quickly demonstrated their clinical competence and efficiency. Once participants established staff were competent and efficient they began to feel safe and consequently felt comfortable to “*hand themselves over.*”

I would say for the first two minutes (I was vulnerable). Two to three minutes. Um, which is in my mind seemed like two to three minutes but it might have been ten. ... There was an intern, there was the nurses and all that stuff and it seemed a little chaotic there. So I felt vulnerable there. I felt “I’m scared here.” ... And then all of a sudden it seemed like the General spoke and everything – the ants got organized... From that point vulnerability left; confidence came back in. (Francois).

The majority of participants did not explicitly state they felt vulnerable in the ED. Rather participants implied they were vulnerable in the course of their descriptions of the meaning of vulnerability. One participant commented “*... they had my confidence very early. ... So no, I did not feel that emotionally or physically I was incapacitated in any way.*” The implication is participants arrive in the ED in a vulnerable state and before they realize they may be feeling vulnerable, staff have already intervened and established a positive relationship with the participant, negating any feelings of vulnerability.

Consequently, feelings of being vulnerable can be minimized through the actions of staff that demonstrate to patients they are in control and can be trusted.

Despite the resolution of perceptions of vulnerability in the ED it returned for some participants after discharge from the hospital. Sue comments: *“And you know actually I continue to feel like that (vulnerable) for a lot of months after.”* This suggests that vulnerability is not something one experiences at a fixed point in time but rather it is continuum based.

Finally, participants were asked if there was anything that made them feel more or less vulnerable while they were in the ED. Participants either gave a brief answer or ignored the question all together. Because participants did not like to admit to feeling vulnerable, they tended to respond with reasons why they were not vulnerable. Thus, when analyzing the data the researcher listed the reasons why participants did not feel vulnerable and reasons they were vulnerable. A summary is found in Table 3.

Table 3 – Reasons for vulnerability

Reasons why participants felt they were not vulnerable	Reasons why participants felt they were vulnerable
* confidence in staff * staff that care * being told what to expect * receiving reassurance * communication * freedom to concentrate on getting better * feeling safe * staff presence * being touched * soothing tone of voice * experienced staff * staff having a plan * teamwork * organization * competence	* being alone * lack of control * feeling scared

4.7 Factors which influence the patients' experience during trauma resuscitation in the ED

To answer objective 3, an examination of the transcripts revealed several key factors that participants described as providing them with a positive experience during trauma resuscitation in the ED. The factors are summarized in Table 4.

Table 4: Factors that positively influence patients' experience

Key factors that positively influence patients experience
* initial contact in ED * a systematic organized approach to trauma resuscitation * an easily identifiable leader coordinating the resuscitation * staff who are in control * expert trauma team members who are familiar with their role * clear communication using language the patient can understand * decisions that are made confidently * staff who know patients name and use it * connection with family and friends but not their physical presence * connection to staff by use of touch, soothing tones of voice * repeated constant verbal reassurance (words and phrases) * patients being contributing members of the team in their care

Overall, participants described their experience as one in which they felt safe. The feeling of being safe was directly related to how they perceived their experience. Factors related to patients' experience of trauma resuscitation in the ED were not found in the literature.

4.8 Summary of findings

The goal of this chapter was to discuss the findings as they answer the three objectives of the study. The first objective was to describe the patients' perspective of trauma resuscitation in the ED. An interpretative approach to data analysis resulted in the identification of four major themes: *I Remember*, *I Was Scared*, *I Felt Safe*, and *I Will Be OK*. The overriding impression expressed by participants was feeling safe. The efficiency of trauma team members in addition to the ability of staff to create an environment in which patients felt cared for, contributed to feelings of being safe.

The second objective was to determine what, if any, perceptions of vulnerability exist during trauma resuscitation. Participants suggested that they are initially vulnerable but it quickly abates as a result of the actions of trauma team members. Vulnerability was associated with feeling scared while feeling safe was linked with being not vulnerable. Consequently, the findings suggest that vulnerability is continuum-based. Perceptions of vulnerability changed depending on the situation or circumstance. A significant point is that in this study vulnerability was perceptually based on participants' subjective continual assessment of the experience. Several system factors, such as an organized trauma team, influenced patients' experience of trauma resuscitation in the ED answering the study's third objective.

4.9 Study Limitations

The small sample was selected from only one campus of a LTH. A second limitation of the study is that the interviews were limited to patients who spoke English. However, the participants whose mother tongue was French were able to converse as evidenced by

transcripts and the information provided was similar to the Anglophone participants. The third limitation of the study could be considered explicitly asking participants about vulnerability. As mentioned earlier, vulnerability is a construct familiar to health care providers but not one with which most individuals identify. However, participants were able to provide descriptions of vulnerability as evidenced by the transcripts.

Chapter 5: Discussion and Implications for Practice, Education, and Research

5.1 Introduction

This chapter will be a discussion of the findings related to the purpose of the study which was to describe the lived experience of trauma resuscitation in the ED as it relates to the three research objectives: (a) to describe the patients' perspective of trauma resuscitation, (b) to determine what, if any, perceptions of vulnerability exist during trauma resuscitation, and (c) to determine what, if any, system factors influence the patients' experience. Implications for practice, education, and research as well as the role of the Advance Practice Nurse (APN) will be highlighted.

The experience of trauma resuscitation in the ED began with the actual event, the mechanism of injury, and intervention by pre-hospital care providers. This was followed by transport to either a trauma center (in the case of five of the participants) or a community hospital ED for initial assessment and stabilization and subsequent transfer to the trauma center (in the case of two participants) for definitive care. Upon arrival in the trauma center ED, participants were quickly assessed and an institutional protocol for trauma resuscitation was initiated. Following the resuscitation, participants were admitted to the Trauma Unit for in-patient care with the goal of having the participant return to optimal pre-injury family and work life.

The four major themes that evolved from data analysis were *I Remember*, which contained participants' recollections of the event that resulted in the ED admission as well as memories of being frustrated while in the ED; *I Was Scared*, which was the result of shock and pain, feeling alone, and not knowing during the initial phase of the trauma

resuscitation; *I Felt Safe*, which was demonstrated by staff efficiency and caring behaviors during the main time frame of trauma resuscitation; and *I Will Be OK*, which reflected participants' belief that they would survive. These four major themes will be discussed to reflect the experience as described by the participants.

Vulnerability was described by participants as being continuum based and it will be discussed as it relates to the four major themes. The follow-up interviews indicated that some of the participants had recaptured feelings of vulnerability as they were recovering, suggesting it may be continuum based. System factors, such as an organized team, contributed to the patients' experience of feeling safe.

5.2 I Remember

The event

Trauma patients' recollections of the event were clear and detailed suggesting the event was imprinted in their minds. In the course of this study, each participant invariably began the telling of his/her story with the phrase "I remember" followed by an in-depth account of the pre-hospital time. The memory of the event was described in a linear fashion by participants. It was a factually based sequential telling of the experience from time of injury to arrival in the trauma center ED.

Some gaps in memory of both the pre-hospital and ED time were noted in participants' recollections. It has been suggested that gaps in memory can be considered as a form of denial (Jay, 1996) in seriously injured patients. Impaired memory can also be ascribed to the body's physiological response as the result of trauma (Cahill & McGaugh, 1998; van der Kolk, Burbridge, & Suzuki, 1997). Of interest is the fact that participants appeared to

feel it was necessary to rationalize why they had an interruption in memory. Justification for gaps in memory was generally attributed to the effects of medication or loss of consciousness. The researcher did not have access to the participants medical records and thus was unable to determine if gaps in memory corresponded with documented altered mental status or administration of medication.

Being frustrated

Recollections included not only memories of the event but feelings of frustration as well. Participants identified several sources of frustration during the time they spent in the ED. For example, participants felt it inappropriate for police to be questioning them shortly after they had sustained major injuries. Participants felt that during the trauma resuscitation they were *“trying to survive”* and so the police presence was considered intrusive. A review of the literature reveals a lack of research related to the effect of police presence on traumatically injured patients in the ED. Rather, the literature focuses on the necessity of accurate objective medical records in the event of legal proceedings (McCarron & Challoner, 1999).

The lone participant who admitted she had been driving while intoxicated and subsequently crashed her car felt frustrated that staff were judging her as *“a drunk driver.”* Police presence magnified the sense of frustration. *“I think it was just the police presence. It just constantly nagged me. And he was there. It felt... I was coming out of jail or something.”* As a result of the drunk driver label, Brenda had the impression staff were punishing her by providing only competent clinical care and not with the sense of caring she felt she required. Grief and Elliott (1994) carried out a study to determine patient characteristics that ER nurses use to morally evaluate patients. The study results revealed a

preference by ER nurses to manage patients with trauma above all others. Patient characteristics that nurses least liked to care for included those who were injured while driving impaired or those who were escorted by police. Lastly, Grief and Elliott's (1994) findings suggest ER nurses are irritated having to care for patients whom they perceive to have self-induced injury or illness. Health care providers no longer use the term 'accident' in reference to MVCs as the word 'accident' implies the event was beyond one's control while MVCs are predictable (Kidd, 1993). Thus, if trauma team members believe that alcohol-related MVCs are not accidents but rather preventable occurrences, it is conceivable staff did in fact judge Brenda as a drunk driver and that she 'caused' her crash.

Lenehan (1986) reports that trauma patients who are labeled as being somehow responsible for their accident will not be seen as legitimate victims by staff and therefore will receive sub-optimal nursing care. Staff may demonstrate a bias against intoxicated patients as studies have suggested there is a 36% recidivism rate in patients who are admitted with traumatic injuries sustained as the result of high risk activity, including driving while intoxicated (Keough, Lanuza, Jennrich, Gulanick, & Holm, 2001). In addition, staff may have a bias against intoxicated drivers if they are aware that the citation and prosecution rate of legally intoxicated drivers who crash their vehicles and are admitted to hospital is low (Cydulka, Harmody, Barnoski, Fallon & Emerman, 1998).

Lack of ability to verbally communicate was a major source of frustration for the one participant that was intubated while in the ED. Frustration as the result of inability to verbally communicate due to intubation is well documented in the critical care literature. For example, a study to describe the experience of impaired communication during short

term intubation found that patients felt frustration, fear and discomfort (Fowler, 1997). Meanwhile Russell (1999) discovered that poor communication increased ICU intubated patients' anxiety while good communication was therapeutic and reassuring. Of interest is that Russell (1999) found a link between poor communication in the ICU and psychological problems in patients post discharge. It behooves staff to remember that while intubation may hinder patients' verbal communication skills, their ability to understand verbal and non-verbal communication may be present.

Frustration was also borne out of participants' not being able to access a phone to contact family while in the ED. Bob comments during the follow-up interview: *"I can relate to that (reading a quote in the summary provided about being frustrated about not getting the phone) they wouldn't let me make a phone call or anything."* Again, participants attempted to rationalize the reasons for altered communication but remarkably, it remained a point of aggravation several months post trauma resuscitation. A review of the literature did not identify inability to contact family/friends in the ED as a source of frustration for patients.

For one participant, an expectation of basic hygiene was not met and the resultant change in physical appearance (dried blood on face) was not only frustrating but interpreted as a lack of caring on the part of the staff. Brenda recalls dried blood being allowed to stay on her face for several hours and it was not until friends arrived to wash her face that she regained her sense of personhood. Brown, Weston, and Stewart (1999) suggest that when patients feel health care providers have ignored them or not listened to their expectations the result is the perception of lack of concern as well as abandonment.

Frustration due to the inability to move related to spinal immobilization was identified. Cervical stabilization using a hard collar and backboard is maintained until the cervical spine can be cleared (Stiell et al., 2001). This process can require several hours to days of ongoing discussion between trauma team members. Although participants understand the rationale for spinal immobilization it remains a leading cause of frustration. For example, Sue cites the backboard as a major source of frustration during the follow-up interview: *“The board that they had me on, I guess when they put me in the ambulance, that board... yeah the board. ...that might have been the only frustrating thing....”* In addition to being a source of frustration, the cervical collar and backboard, which were applied by pre-hospital personnel, were also associated with pain. A study by Cross and Baskerville (2001) using 18 healthy volunteers compared severity and location of pain from wood backboards versus mattress splints. Pain was assessed, using a visual analogue scale (VAS) at 0, 30, and 60 minutes. Results indicated the occiput, lower back, and sacrum as being pressure points. In addition, volunteers on the wooden backboard had higher self-reported scores on the VAS than those on the mattress splint.

During this initial period perceptions of vulnerability developed related to feelings of being scared.

5.3 I Was Scared

Aspects of the trauma resuscitation that contributed to patients feeling scared were living through the shock and pain, feeling alone, and not knowing. Findings in the current study also clearly identified that participants' had perceptions of vulnerability during trauma resuscitation in the ED related to feeling scared. This is in keeping with Spiers' (2000) definition of vulnerability as a “perception or feeling of potential harm” (p. 716).

In the current study, vulnerability began with the event and continued into the ED.

Participants suggested they were vulnerable for the first few minutes after they arrived in the ED and this was associated with feelings of being scared. Initially, being alone and lack of control contributed to an overall feeling of being scared. This is congruent with Ellett and Young's (1997) suggestion that the emotion associated with vulnerability is fear.

Living through shock and pain

Shock was perceived to be a protective mechanism for patients as it temporarily shielded them from the pain of their injuries. Physiological descriptors of shock from participants included feelings of euphoria, seeing bright lights, shaking and intense cold. Shock states can result in alterations in level of consciousness (LOC) that manifest as restlessness, anxiety or confusion (ENA, 2000). Although participants in this study did not suggest they were anxious or confused, any alteration in LOC may have shaped perceptions.

Two participants described episodes where they saw a "*bright light*" while they were in the ED. One participant, unable to explain why she saw the light, suggested it was a "*very very weird dream.*" The second participant commented "*... actually to be me, the guy sitting outside his own body watching this happen – what an experience and a half!*"

Lawrence (1995) conducted interviews with 100 patients, with a variety of diagnoses, who had been documented to be unconscious while in hospital. Results indicate five states: unconsciousness, inner consciousness, perceived consciousness, distorted unconsciousness, and paranormal experiences of which patients could have one or more. Distorted consciousness accounted for 14% of patients and involved perception, memory, and personality distortions. Sue may have experienced distorted consciousness during her

“weird dream.” Francois’s out of body experience would be considered a paranormal experience. According to Lawrence’s study (1995), 23% of the patients interviewed had a near-death experience, an out-of-body occurrence, or a near-death visit.

Physiological indicators of shock included sensations of cold and shaking (Cardona et al., 1994). The participants in this study sustained their injuries between January and early May. The daily mean temperature in Ottawa ranges between -10.8 °C in January and 12.8°C in May (Environment Canada). The standard waiting time on scene for pre-hospital is 20 minutes (Trauma Services, 1999). Hypothermia must be considered as a factor in participants’ descriptors of shock as all injuries occurred outdoors where patients were exposed to cool ambient temperatures prior to assessment and extrication by pre-hospital health care providers.

Participants sustained significant injury and the subsequent pain they endured was vividly described. Descriptors of pain as *“intolerable”*, *“excruciating”*, and *“unbearable”* might suggest participants did not receive adequate analgesic. The intensity of the pain could be considered a traumatic event in and of itself. The magnitude of the pain experienced by participants gave rise to thoughts of self protection. One participant commented the pain was so extreme that she asked staff *“to get to the point and leave me alone.”* Pain can be all-consuming and result in patients wanting to be left on their own to survive it.

A study of pain management practices by Tanabe and Buschmann (1999) with 203 patients in the ED, excluding those requiring trauma resuscitation, found that the rating of a patient’s pain did not influence its treatment. Specifically, their study found that all patients had an equal chance of receiving analgesic medication regardless of the severity of

their pain. Traditionally, pain medication is withheld in ED patients who may require surgery as it is used as a diagnostic aid during assessment. In a multi-center survey of Level 1 and Level 2 trauma centers in Israel, 78.6% of respondents stated they would withhold analgesics in trauma patients as they believed localized pain assists with diagnosis (Zohar et al., 2001). As a result of the findings from Zohar et al. (2001), a pain management protocol was introduced and became routine practice. Although no elaboration of the protocol occurred, Zohar et al. (2001) emphasized that such a protocol resulted in increased patient cooperation and overall satisfaction with pain relief during the entire hospitalization. Recognizing the importance of pain management in trauma, the most recent edition of Trauma Nursing Core Course guidelines explicitly state comfort measures, such as pain management, must be considered during the secondary assessment (ENA, 2000).

Pain was described most often in relation to injury rather than procedures. Impressive by omission was the fact that participants at no point during initial, or during follow-up interviews, challenged the care they received as it related to pain management. There appeared to be no expectation of pain relief or pain management during trauma resuscitation from participants. Pain was rationalized as necessary due to the urgency of their injuries. Pain must be endured in order to live. This perception differs when patients are certain they will survive their injuries. For example, a study of 107 ED patients with acute long bone fractures found 70% wanted pain control without sedation and 25% wanted pain control even if it meant being sedated (Beel, Mitchiner, Frederiksen, & McCormick, 2000).

Pain management is clearly not an expectation of trauma patients when they believe their life may be compromised yet this does not discount the importance of consideration of pain management interventions in this population. A study by Stank-Hutt, Soeken, Belcher, Fonatine, and Gift (2001) determined that their sample of 30 hospitalized multiple trauma patients experienced moderate to severe pain. Pain almost always occurred in the area of the injury. Patients' expectations of pain management during trauma resuscitation have not been well described in the literature, suggesting a need for future research. An additional finding of Stank-Hutt et al. (2001) was that being turned resulted in a major increase in pain.

In the current study, participants also identified moving and turning as a major source of procedural pain as well as intensifying existing pain. Procedural pain that was described by participants in this study generally involved positioning and transferring patients on stretchers. Georgette comments: *"My ribs. Every time I had to move for a test or something. Oh, it was excruciating."* This suggests that movement and positioning intensify already-acute pain.

Procedures during trauma care are often done on an urgent or emergent basis therefore there is little time to prepare a patient. Consequently, patient cooperation during procedures facilitates the process. Pain associated with nasogastric (NG) insertion, chest tube insertion and Foley catheterization was acknowledged by participants. Insertion of tubes seemed to present a stressful and remembered experience for participants. A common procedure that trauma patients endure is insertion of a NG tube. A study of 32 cases of NG tube insertions were captured on videotape and later analyzed to identify comforting strategies (Penrod, Morse, & Wilson, 1999). Findings suggest that a

combination of talk and touch from nurses based on interpretation of patients' verbal and non-verbal feedback is the ideal blend of comforting strategies during NG insertion in trauma patients, to decrease feelings of being scared.

Emotional pain of the traumatic event and subsequent trauma resuscitation emerged in the form of nightmares and flashbacks. Participants stated nightmares began upon admission to the Trauma Unit and in some cases were still experienced several months post trauma. A summary of the immediate and long-term effects of traumatic events on sleep was completed by Lavie (2001) and recommendations for treatment were presented. Poor sleep post-trauma is a normal initial reaction to crisis and is generally transient in nature. Long term sleep disorders, according to Lavie (2001), may be antecedents or precursors to psychological disorder and thus need to be treated as a separate clinical problem. A study involving 96 patients who sustained severe traumatic brain injury found 27% met the criteria for Post Traumatic Stress Disorder (PTSD) six months post trauma (Bryant, Marosszeky, Crooks, and Gurka, 2000). The presence of intrusive memories, nightmares, or emotional reactivity was cited by the authors as strong indicators of PTSD.

In some instances, the safety and comfort of one's own home provided an environment for nightmares to cease to exist. During the follow-up interview Francois explained why the nightmares he experienced in the Trauma Unit ceased after his discharge home: *"They stopped on their own within a, about a week after I was home. Cause I feel safe in my home surroundings and it's my home."* Sue stated she was still having nightmares during the follow-up interview. Symptoms, such as arousal and intrusive thoughts, in the initial month post trauma may in fact be an acute stress disorder (Bryant & Harvey, 1997) which can develop into PTSD. Of note, Francois stated that each time he drives through the

intersection from his MVC *“the little hairs on the back of my neck go up”* and Sue stated she *“still has flashbacks”*. Neither Bob nor Brenda mentioned experiencing nightmares or flashbacks. A study of 40 MVC patients that required hospitalization found that seven had PTSD, seven had a major depressive disorder, and 12 had no disorder during a six month follow-up (McFarlane, Atchison, & Yehuda, 1997). This finding supports earlier work by Norris (1992) who, in a study of 250 people to determine the long term consequences of Hurricane Hugo, found that a MVC emerged as a significant event with a lifetime frequency of 23% and a PTSD rate of 12%. The rate of PTSD post MVC has implications for practice and suggests these patients may require follow-up.

None of the patients interviewed in this study mentioned any formal intervention or discussion with health care providers regarding their psychological well-being post trauma. One participant did mention meeting with the priest, while a patient in the Trauma Unit, to discuss his near-death experience. Sue mentioned during the second interview that it had been suggested she seek professional help for her continued nightmares but she seemed reluctant to do so. Psychological assessment of patients who have sustained traumatic injury, for example, as the result of an MVC, should be considered routine (Joy, Probert, Bisson, & Shepherd, 2000). Joy et al. (2000) completed a prospective, cross-sectional study of 152 trauma patients in Wales. Study findings suggested levels of pre-trauma functioning were not an indicator of developing PTSD thus stable individuals can develop psychological distress.

Coping mechanisms that may have been utilized in the past re-surfaced as a means of dealing with injury and trauma resuscitation. For example, Sam, a young male, admitted to crying and Georgette, an older participant, suggested moaning aloud was a relief.

Regression is cited as one of the coping strategies utilized by trauma patients and is a purposeful behaviour that allows an individual to preserve psychological integrity (Lenehan, 1986). Results of a study by Morse and Proctor (1998) suggest that the comforting behaviours of nurses, such as touch, eye contact and talking patients through procedures assists them to endure the pain and stay in control, thus decreasing stress.

Feeling alone

One of the ironies of trauma resuscitation is participants' sense of being alone and isolated despite being surrounded by the trauma team members. Feelings of being alone were intensified for patients when staff were out of visual range even though they may have been at the foot of the stretcher completing documentation or vigilantly watching the patient from a few feet away while attending to other measures. It must be remembered that the patients' visual range is severely restricted due to their usual supine position in the ED.

Loneliness is described by Killeen (1998) as a feeling of being by your self without choice. Injury and subsequent trauma resuscitation are solitary experiences for patients as described by one participant: "*You are a lonely tennis player.*" For example, coaches, physiotherapists, and fans can all provide physical and emotional support to the tennis player but ultimately it is the individual player who wins or loses the match. Likewise, trauma team members and family can support the patient physically, emotionally, and spiritually through the experience but the experience itself belongs only to the patient. The patient alone survives the experience. The trauma literature does not reflect this experience of feeling alone in the ED.

Not knowing

The third category associated with patients feeling scared is the unknown. The need for information (ENA, 2000) is the number one need of trauma patients. Lack of knowledge, lack of experience as a patient in hospital, and the uncertainty associated with the extent of injuries influences feelings of being scared. In a descriptive study examining whether or not ED patients and nurses have similar perceptions of patient needs, Hostutler, Taft and Snyder (1999) found 42% of ED patients listed explanations for what was happening as important and that nurses were not always aware of patient needs. The results of the current study support the work of others that nurses may not meet patients need for information and explanation in the initial phase of trauma resuscitation. Consequently, the unknown may contribute to feelings of being scared. In addition, individuals may anticipate the worst when they lack concrete information and this feeling of potential harm may affect perceptions of vulnerability.

5.4 I Felt Safe

As feelings of being scared decreased and participants began to feel safe their perceptions of vulnerability shifted from being vulnerable to non-vulnerable. This is congruent with Spiers (2000) definition because the perception of potential harm decreased as participants began to feel safe. Of interest, one participant unequivocally stated in the follow-up interview that there was nothing trauma team members could do to absolutely eliminate vulnerability. Staff may be able to minimize patients' perception of vulnerability but that initially "*vulnerability was part of the process.*" Trauma team members, through their actions, quickly alleviated feelings of being scared and participants began to feel safe.

Two main factors contributed to this perception of being safe: i) the process of trauma resuscitation (efficiency) and ii) the relationship (caring) between patient and trauma team members. The intricate balance between these factors resulted in patients feeling safe despite having just sustained potentially life-threatening injuries.

The significance of trauma patients' feeling safe was not reflected in the ED literature, yet it has been explored in critical care. A study of the psychosocial needs of critically ill patients in ICU found that they had an overwhelming need to feel safe (Hupcey, 2000). Perceptions of feeling safe were based upon family and friends, ICU staff, religious beliefs, and feelings of knowing, regaining control, hope and trust. In her study, Hupcey (2000) also noted that trust in staff was implicit as it was mentioned only by patients who expressed distrust. Sources of support were identified as being family and friends. Of interest, family and friends did not have to be physically present to allow patients to feel safe; they only had to be accessible (eg: by phone). Lastly, Hupcey noted that ICU patients expressed feelings of being safe that stemmed from religious beliefs.

Morse (1997) suggests that individuals will feel safe only when they sense the "caregiver is competent, vigilant and trustworthy" (p 30) and at that point alone will they be able to hand over the responsibility for their well being to the health care providers. Relinquishment occurs during vigilance, the initial stage in Morse's five stage model: Responding to Threats to Integrity of Self. It is during the stage of vigilance that patients suspect something is wrong with their body, that they are injured. Consequently, once trauma team members have established that they are in fact competent, the patients will hand themselves over, or relinquish themselves, to the staff's care. The discussion will focus on the efficiency and caring of staff that contributed to feelings of being safe.

They were efficient

Participants identified the process of trauma resuscitation, the systematic organized approach, as essential in contributing positively to their experience and making them feel safe. This systematic approach resulted in staff efficiency that was demonstrated through i) quickness, ii) giving confidence to patients, iii) always checking, iv) organization, and v) providing patients with information. System factors which contributed to a positive experience included an easily identifiable leader, expert team members who were familiar with their role, and confident decision making by team members. There is a gap in the literature as it relates to patients' perceptions and experiences as recipients of a trauma system. Performance can be enhanced when processes are improved (Keill & Johnson, 1994). The findings in the current study suggest that consideration for including patients' perceptions of the process of trauma resuscitation may be valuable for future system improvement. For example, interventions such as nursing and medical designated leaders that participants identified as contributing to their feeling safe should be reinforced in future system improvement.

Technical nursing behaviours were identified as the most important indicator of caring in a study by Huggins, Gandy, and Kohut (1993). A total of 288 patients were interviewed by telephone within one month of discharge. The patients represented those with ED triage categories of emergent, urgent, and non-urgent. Patients in all categories identified technical competence of nurses as most important to caring. In this current study, technical competence was demonstrated through efficiency that resulted in participants feeling safe.

A perception of ER care in elderly patients was examined by Watson, Marshall, and Fosbinder (1999). Although no diagnosis was provided, the patients required immediate

management. Five themes were revealed: need for information, observations of waiting time, perceptions of professional competency and caring services, concerns about process and facility design, and personal tolerance. These five themes reflecting clinical efficiency and caring are similar to those in this current study.

Everything went so quick

The perception of instantaneous response by staff to participants' arrival in the ED indicated that others viewed their injuries as serious. This view was foundational in participants' sense of feeling safe. Participants were able to discern that staff was not only providing technically competent care in a timely manner but that the delivery was seamless. This perception of seamlessness in care delivery contributed to participants feeling safe, related to process, facility design and waiting time as identified by Watson et al. (1999). A satisfaction survey of 258 patients from three EDs identified the amount of time it took to be cared for as the most important variable (Bursch, Beezy, & Shaw, 1993). This sentiment was also identified in a study of 11 patients admitted to acute medical wards who were interviewed about their perception of time while in hospital (Holloway, Smith, & Warren, 1998). Patients in Holloway et al.'s study (1998) suggested that they felt valued when nurses made time for them. In the current study, participants felt staff valued the severity of their injuries as demonstrated by the quickness of response.

Although the focus of the interviews in this current study was the ED experience, participants did comment on quickness as they compared their observations of staff competence in the ED and on the Trauma Unit. For example, one participant remarked that the nursing staff on the Trauma Unit took much longer to prepare and administer analgesics because they were less experienced nurses as opposed to the expert nurses in the

ED who responded quickly and without hesitation. The quickness of response by ED nurses denotes an expertise to participants and is demonstrated as immediate autonomy of action and intervention without having to consult with others.

Professional competence, described by Watson et al. (1999), could include actions such as the quickness of staff in setting priorities. Participants described an acceptance of the ABCD approach to trauma care and made reference to prioritization of tasks. For example, participants commended staff's priority to treat their 'breathing' before preparing analgesic medication. In addition, participants recognized clothing must be cut off rather than removed intact in order for staff to fully assess injuries.

Participants were impressed by the constant movement, the constant action of the trauma team members. The "*buzz*" of activity in the ED and description of staff as "*busy bees*" denotes the energy and movement of trauma team members. Participants made references to staff activity such as "*like a centipede – all legs were moving at the same time.*" It is interesting that staff are compared to insects – hard working industrious creatures that people do not notice or know much about until they come face to face with them. This speed and constant purposeful movement lead to feelings of confidence in staff and an overall sense of being safe.

They gave me confidence

The quickness of activity did not preclude staff from conveying to patients a sense of confidence that they were being cared for by experienced practitioners. Being admitted to the ED of a trauma hospital connoted staff expertise and familiarity in managing patients with serious traumatic injury. Awareness of the facility's capabilities can influence patients' expectations and levels of trust or mistrust (Hupcey, Penrod, & Morse, 2000). In

this current study, participants expressed relief at having been transported directly to TOH or being transferred from community hospitals. Patients did acknowledge the competency of staff in the smaller centres but suggested that transfer to a trauma center would provide them with optimal care for their injuries. In a follow-up interview, one participant reflected on how grateful he was that paramedics made the decision to transport him directly to the trauma center rather than a community hospital where he is certain his outcome would have been different.

A connection was established between staff and the trauma participants at the time of initial interaction and this connection set the tone for the relationship. The connection was based on perceived clinical competence demonstrated by trauma team members. Participants suggested clinical competence was confirmed in how the first staff member interacted with them, oftentimes while they were still on the ambulance stretcher, or in how they were transferred from ambulance stretcher to ED stretcher. During that initial contact, trust was established in the trauma team members' clinical competence. It seems that feelings of being safe are contingent upon the establishment of a trusting relationship during initial contact and strengthened with each subsequent interaction. Trust, as a result of immediately sensing the nurses' competence, was identified by Hawley (2000) in her study exploring the comfort needs of ED patients. In another study, trust was established and maintained between participants and staff because there was congruence between the actions of staff and the expectations of the participants (Hupcey, Penrod, Morse, & Mitcham, 2001). The perception that staff were always checking them was an action participants in the current study identified as significantly contributing to feelings of confidence and ultimately being safe.

They were always checking

Participants derived a sense of being safe and secure through the trauma teams continual checking of them. Procedures were completed and then their effectiveness evaluated. Checking is ‘doing’; it is an active process. The participants felt safe when they believed staff were actively ‘doing’ something to them as opposed to passively standing back and ‘observing.’

Checking as an active process also included the participants as partners in the investigation of actual and possible injury. It is in part this perception of usefulness that contributed to participants feeling safe during the trauma resuscitation in the ED. Questions from staff, for example *“Can you feel this in your neck? Can you feel this with your arm?”* and commands, for example, *“Asking me to move things,”* permitted participants to be active members in the assessment process. The sense of inclusion in the team afforded them a degree of control over the events unfolding both to them and around them. As a contributing member of the team, they regained some control in their lives by acquiring a sense of usefulness (Sweet, 1994).

Attree (2001) has cited that checking and following up demonstrates care and concern to patients. This systematic assessment reassured participants that they were in fact *“in good hands.”* The participants in this study were able to discern between internal and external injury and the necessity of staff to be checking for both. Belief that staff was engaged in a comprehensive assessment furthered the participants’ sense of being safe. *“Well, like when they said, “Now we’re sending you to x-ray.” So I know “OK there’s something inside me they’re checking.” They’re checking inside me.” (Brenda)* Consequently, this activity by staff resulted in participants feeling safe as they believed

that anything potentially harmful would be detected by staff before it could negatively impact upon their well-being. Checking implied to participants an organized approach and plan of care.

They were organized

There was an expectation for expert care at the trauma center and this was reinforced with an organized trauma team response. Rather than causing concern, the team response to injury was one of the factors remarked upon by all participants and contributed to feelings of being safe. Seamless management of the care of the trauma patient was facilitated with the use of an institutional protocol. This organized and systematic approach has been demonstrated to reduce mortality and morbidity rates of seriously injured patients (Mullins et al., 1994; Petrie, Lane, & Stewart, 1996; Smith et al., 1990).

Initially after arriving in the ED, participants described feeling vulnerable as a result of having little control over actions taking place during the resuscitation. Feelings of vulnerability shifted as participants began to trust staff or in the words of one participant, he put his destiny and control in the hands of the professionals – the trauma team members. The perception of staff being in control and being able to identify one clear leader was a significant factor in minimizing vulnerability. The systematic organized approach to trauma resuscitation that encompasses quick assessment and intervention was identified by participants as contributing significantly to their perceptions of feeling safe and consequently not being vulnerable. The effectiveness of trauma systems has been demonstrated to improve patient survival (Sampalis et al., 1995) but the literature does not reflect any studies to evaluate the impact of a systematic approach on patients' perceptions of vulnerability.

The large numbers of multi-disciplinary staff responding at the bedside was reassuring to the participants largely on account of their opinion that the trauma team members functioned in a highly organized manner. This is in contradiction to Watts (1998) who suggested that a trauma team response actually increases feelings of vulnerability as the many team members remind patients of the severity of their injuries. Patients did explicitly state that if they had not had the sense of a well-organized team, their reaction to the trauma resuscitation would have been different. They clearly remarked on the fact that the confidence they had in the staff, based on their demonstrated clinical competence, allowed the participants to hand themselves over to the trauma team and concentrate on getting better.

One easily identifiable leader, a central figure in control, to whom everyone listened, was another factor that granted participants' peace of mind and assurance that the trauma resuscitation was organized. The leader identified by participants was the Trauma Team Leader (TTL), an attending staff physician whose role was to oversee the management of the trauma resuscitation. A study of 425 trauma resuscitations, 89.6% of which had an attending staff as TTL as opposed to a surgical fellow or resident, demonstrated that orderliness, completion of the secondary assessment, and formulation of a definitive plan of care was significantly higher when the attending staff was TTL (Hoff, Reilly, Rotondo, DiGiacomo, & Schwab, 1997). One participant commented that he was easily able to identify two leaders during his resuscitation; one nursing leader and one physician leader. Trauma resuscitation protocols distinctly identify a TTL in addition to Nurse 1, whose role is to coordinate the bedside activity during the resuscitation in conjunction with the TTL. Poorly coordinated disorganized trauma resuscitation will be chaotic and consequently

may result in harm to the patient (ACS, 1998). Indeed, the presence of TTLs does result in decreased resuscitation time in the ED (Khetarpal et al., 1999).

The trauma system and institutional protocols guide the delivery of organized systematic care. One participant commented on the protocol the nursing staff followed to ensure safe keeping of his valuables. The assigned duties inherent in the trauma protocol provide structure and clearly defined medical (TTL) and nursing (Nurse 1) leaders. Designated roles and duties alleviate any debate about what is required; each team member has a job to do and is accountable and responsible for its completion. This process allows staff to proceed in a systematic 1-2-3 manner, from start to finish, lessening the possibility of omitting a key step. These organized actions of trauma staff left an indelible impression on participants, such as the comment: *"I guess the teamwork had to be the number one thing."* Provision of care alone is not enough to have patients feel safe during trauma resuscitation. Care delivery must be given in an organized manner by a team of health care providers in order to reinforce patients' perceptions of feeling safe and minimize feelings of vulnerability.

You know what's going on

Clear communication in a language the participants could understand was cited as a positive factor in the experience. The information shared with participants with respect to what was wrong with them, what they were waiting for, and why the procedures were being performed gave them a sense of knowing. The ability of staff to answer questions addresses the patients' need for information (ENA, 2000). This transition, of being scared from not knowing to feeling safe as a result of knowing what was going on, suggests a continuum of trauma care. An awareness of what is happening and what will happen in the

near future helped, in this study, to mitigate participants' fears and feelings of being scared. The participants valued ongoing explanations by trauma staff of what was occurring or what to anticipate. Fear of the unknown was balanced by reassurance and communication from staff as part of participants' experience. A communication style that allowed for a feedback loop was key in keeping them informed. For example, it was not enough for staff to tell participants they would contact their family member on their behalf. Participants appreciated knowing that a call had been placed to their family when staff returned to the bedside to tell them and this encouraged trust in staff and consequently the feeling of being safe during resuscitation. There is a paucity in the literature related to a communication feedback loop between trauma team members and patients.

One advantage to a trauma team response is that a patient is then the recipient of care by dedicated nursing and medical staff. These assigned roles may help to provide greater opportunities for communication with patients as staff do not have to attend to other patients simultaneously.

A significant finding of this study is that participants wanted to be actively involved in their care. Any participation in their care contributed to participants' general knowledge of the process of resuscitation and specific procedures being completed. Active involvement was described as being given a task by staff on which they could concentrate. For example, one participant was given the task to concentrate on breathing while another was included in the preparation and implementation of a logroll. No literature was found related to patients being included as members of the trauma resuscitation team.

They cared about me

Participants felt cared for because of the measures undertaken by trauma team members. Caring behaviours emerged in this study from i) how staff talked, ii) connecting with family and friends on behalf of the patient, iii) physical presence, and iv) use of touch. These caring behaviours displayed by staff during trauma resuscitation were cited as a factor that positively influenced the participants' experience. Participants had the impression that trauma team members genuinely cared about them as individuals, rather than simply the next trauma patient with which they had to deal. These caring behaviours demonstrated by trauma team member's, such as use of presence, touch, tone of voice, and reassuring words and phrases, all contributed to diminishing perceptions of vulnerability. One of the underlying assumptions of Lessick et al. (1992) vulnerability model is that "nursing interventions can affect vulnerability" (p.3) and this is supported in the current study findings. Further research is needed to examine the impact of interventions, such as touch, on perceptions of vulnerability and the relationship of vulnerability with feelings of being safe.

Comfort is derived from staff based on the knowledge and skill of the team as a whole and the individual members. Morse and Proctor (1998) suggest that strategies for comforting trauma patients are not formally taught but rather are learned by junior staff from observing senior experienced staff. The comfort trauma patients obtain from staff is really rooted in communication. Participants in this study identified the use of humour, having knowledge about their situation, and how staff talked to them and touched them. Talk and touch are basic low technology, low-cost interventions that have a direct impact on feeling safe during trauma resuscitation.

It was how they talked

The way the staff spoke had meaning beyond the actual content of the words. Tone of voice, the way they said what they said, had a positive effect on participants during trauma resuscitation. Voices of staff were described as “*soothing*,” “*calm*,” and “*like they had feelings*.” Morse and Proctor (1998) found nurses’ speech with trauma patients was often slow, short simple sentences with a rhythmic pattern or sing-song quality. Tone of voice encouraged patients’ ability to connect with staff. The calm soothing tones supported the assessment by patients that staff was in control. On the contrary, loud, yelling, stern voices might have indicated chaos or lack of control.

In the current study, soothing tones communicated a calmness that extended beyond what staff was saying to indicate that staff were in control of the trauma resuscitation. Participants were able to identify and focus on one distinct, clearly authoritative voice. The leader’s voice was noted to be soothing as it relayed a sense that everything would be OK. The content of the spoken word was not as important as the tone of voice of the leader.

How staff spoke with participants manifested itself in several ways, such as addressing them by name, the way they spoke, humour, and tone of voice. Participants remembered staff introducing themselves by name thus giving the staff members an identity. In addition, staff used the participants’ given names when addressing them and this contributed to participants feeling safe. Calling them by name allowed for some normalcy in an otherwise abnormal circumstance. Consequently, a connection developed between staff and the participants on a personal level that was a foundation for feeling safe.

Verbalizations by staff were also noted for frequency. It was not only how the staff communicated but how often – it was voice as motivator. The voice of the staff, the voice

that they connected to, became a motivator for the participant to survive. The combination of tone of voice and voice as motivator served as a fundamental basis from which participants felt safe. Nurses' repeated use of motivating phrases such as "*You're doing fine*" and "*Everything is going to be OK.*" These phrases were remembered by participants. This is consistent with work done by Proctor et al. (1996) exploring the comforting sounds of nurses towards trauma patients in the ED. Proctor et al. (1996) described motivating phrases as having a function to help patients "hold on" as they communicate praise, tolerance, support, guidance and distraction for them.

Repetition of encouraging words and phrases was a vital strategy used by trauma team members to motivate the participants to fight. Helping to "hold on" is one of four primary reasons nurses talk to trauma patients (Proctor et al., 1996). One participant described the continual repetition of encouraging words as something that "*keeps your lifeline open.*" Verbal encouragement was a source of strength for participants. Another participant referred to encouraging phrases by saying "*that's what you want to hear.*"

Both staff and patients initiated humour as a means of communication. Although humour can be very personal, use of humour can foster a feeling of humanity in a very uncertain circumstance. It helps make things normal and ordinary despite extraordinary events. Humour has been demonstrated to help chronically ill patients cope with difficult situations (Astedt-Kurki, Isola, Tammentis, & Kervinen, 2001) but its use has not been studied in the ED. Inherent in the humour found in the ED is camaraderie between members of the trauma team and the participant. It is this camaraderie, this familiarity between staff that is demonstrated by the use of humour that contributed positively to the participants' feeling of being safe.

Letting family and friends know I was there

The connection that family and friends provide is comfort based on protecting the patient from emotional upset or duress. Interestingly, during trauma resuscitation in the ED, participants did not express a desire to have family and friends at the bedside. That is not to say they did not want them close by. It was important to have someone who ‘knew’ them to have been advised of their admission to the ED and that they were close at hand. Surprisingly, none of the participants interviewed commented on the fact that they would have wanted family or friends present at the bedside during the initial assessment and stabilization phase of the trauma resuscitation. This finding is in contrast to the literature about the benefits of allowing family at the bedside during resuscitation for cardiac arrest (Back & Rooke, 1994; Eichhorn et al., 1996; Timmermans, 1997) and during invasive procedures for critically ill patients (Eichhorn et al., 2001). No literature was found exploring patients’ perceptions of family presence during trauma resuscitation in the ED.

This self-imposed disconnection from family and friends may have served a protective function for participants. They implied that their survival required all of their energy and strength while family presence at the bedside would require their using some of that necessary energy for them to reassure their loved ones they would be all right – energy they did not feel they could spare.

One participant explicitly stated that the presence of family at the bedside during trauma resuscitation might impede the staff’s access to him in the event his condition worsened. Thus, family at the bedside may be perceived by patients as distressing rather than a comfort. Participants expressed a preference for expert professional presence instead of a familiar family/friend presence when they believed their survival was at stake. Conversely,

once stable, participants did derive comfort from the proximity of family and friends at the bedside and there was a certain expectation that they would in fact be there. For example, Sam did not want his parents with him during trauma resuscitation because at that time he *“just wanted to live”* but continued, saying that *“I’d be more than happy to see them after that fact than before, really. I don’t think I would have wanted them to see me before the fact. I think it would have given them a scare, you know.”* This comment implies that participants, by not having family present, were protecting them.

However, as stated, participants wanted someone ‘known to them’ to be aware of their presence in the ED. Safe with the knowledge that loved ones knew of their whereabouts, participants felt less alone and isolated. Letting family and friends know of their presence in the ED provided participants with a connection to the ‘real’ world. Family and friends did provide some measure of comfort to participants but it was fundamentally the trauma team members who permitted them to feel safe and secure within the context of trauma resuscitation.

A holistic perspective, during CPR, put forth by Timmermans (1997) places patient survival as an overall goal as well as family being actively involved with staff as opposed to being cared for by staff. Active involvement must be more clearly defined so that the way families are involved is congruent with the patients’ preference for their involvement. Although this perspective has not been explored in trauma resuscitation, this study supports taking the holistic perceptive one step further to include the patient as an active member of the team, when appropriate, along side trauma team members and family/friends. This is worthy of consideration as this study’s findings suggested participants did not want family/friends at the bedside during resuscitation.

Staff was always there

The numbers of staff responding to the ED assured the trauma participants that their injuries, which they intuitively knew to be serious, were being treated as important. Again, *this shift from feeling alone and scared to feeling safe from staff presence reflects a continuum in trauma care.* They obtained a sense of security from the physical presence of the staff that in turn added to their feelings of being safe. This is consistent with Morse and Proctor (1998) who found the combination of comfort talk, nurse posture, touch and gaze made it possible for patients to endure incredible pain. Trauma team members were able to reassure participants through their presence which was demonstrated by how they talked, physical proximity, eye contact, and use of touch.

The ability to see staff was very important to participants. However, this visualization can be impaired if supine on a stretcher with a hard cervical collar in place. Trauma team members may be at the foot of the stretcher, a mere few feet away from the patients' head, but not in participant's range of vision. Presence of staff is a useful intervention to decrease patients' anxiety and increase a sense of security (Snyder, Brandt & Tseng, 2000). Staff presence also has implications for minimizing perceptions of vulnerability. Rose and Killien (1983) suggested social support provided to an individual by significant people in the individuals' environment will decrease vulnerability. This study suggests that while family and friends are important to the trauma patient, it is the presence of the trauma team members and the support patients derive from the team in the ED that will decrease perceptions of vulnerability.

Touch made me feel better

Touch has been demonstrated to be an effective nursing strategy (Chang, 2001; Estabrooks, 1989). Jay (1996) suggests that seriously injured patients have an expressed need to be touched as a strategy to reduce anxiety and provide reassurance. The combination of touch and presence serves to comfort and reassure the patient that all will be well. In a synthesis of presence, touch and listening, Fredriksson (1999) identifies two main purposes of touching patients: task oriented and as communication. In the current study participants interpreted and remembered touch from staff as communicating a sense of caring. One participant stated that when staff held his hands or shoulder they were giving him their energy. An energy transfer occurs from staff member to patient in order for patients to have the reserves to fight and survive their injuries. Francois did comment that staff must be “*drained*” after caring for a patient during trauma resuscitation as they would have depleted their energy reserves after giving their energy to the patient. The exchange of energy between trauma team members and patients during trauma resuscitation is not reflected in the literature.

Staff made a connection with participants, and imparted a feeling of caring, through the use of touch, tone of voice, repeated constant reassurance, use of words easily understood, and having participants feel they were members of the team contributing in their care. All of these factors, except for participants as members of the team contributing in their care, are supported in the literature (Estabrooks, 1989) but their relevance to perceptions of vulnerability require further research.

5.5 I Will Be OK

When reflecting back on the experience of trauma resuscitation participants expressed a belief that “*I will get out of here*”, that they would survive beyond the ED. Belief that they would survive their injuries is significant as it suggests that participants’ perception of vulnerability was minimal as they no longer considered themselves to be in imminent danger physiologically. Once safely admitted to the Trauma Unit, participants began to contemplate their lives, and concluded “*I appreciate things*” differently from before the event. The study findings suggest that after undergoing trauma resuscitation, patients reflect on what happened to them in an attempt to understand it.

I will get out of here

Participants believed early on that they would survive their injuries and get out of the ED. This conviction was based on their sense of responsibility to family and will to live. One participant explicitly stated that his will to live was the “*biggest factor*” followed by his “*sense of family*” as he was the primary caretaker. Other participants also considered family and loved ones as central in their belief they would get out of the ED. Participants expressed that they had no choice other than to recover fully because family and other life responsibilities necessitated their getting better.

An examination of the meaning and purpose of recovery in 13 post-acute myocardial infarction (MI) patients determined that spirituality was a large component of their recovery (Walton, 2002). The study identified five phases of recovery: facing mortality, letting go of fears and turmoil, identifying and making lifestyle changes, seeking God’s purpose, and finding meaning and purpose in everyday life. Patients had to face their mortality during the event and male patients reported being afraid of death because of the

burden it would place on their families. As staff began treatment and patients began to have faith in the staff's ability, they were able to let go of their fears. A period of self reflection followed when patients gave meaning to the event and identified lifestyle changes they would embark upon as they felt their survival meant God had a purpose for them in life. Considering their recovery as a second chance, patients made changes in their lives that allowed them to slow down and enjoy their families, environment, nature, and God. Once participants in the current study were secure in the knowledge they would get out of the ED, recovery began in earnest.

Crisis, stabilization, and healing are three phases of coping identified in a study of 30 patients who sustained traumatic injury (Welch, 1995). The first phase, crisis, is applicable to trauma resuscitation in the ED as it is defined as the time when patients cope by using amnesia, dreams, family support and religion. In the current study, participants clearly identified their families and religious bases as resources they used to help them believe they would get out of the ED and that they would be OK. The other two phases identified by Welch are stabilization, which is described as the period when physical recovery slows and emotional aspects of trauma appear, and healing, when patients mobilize all their energy for their recovery. Welch did suggest that depression in patients who survive a serious injury impedes recovery. Although these last two phases may not be relevant in the ED, they may be applicable further along the trauma care continuum.

A review of 187 articles in the nursing literature was completed by Baldacchino and Draper (2001). They found few studies that had directly examined spiritual coping strategies. Baldacchino and Draper (2001) suggested that whether an individual was a believer or non-believer, illness made them realize they had little control over their lives.

They concluded by suggesting that spiritual coping strategies may enhance a person's self-empowerment so that they can find meaning and purpose in the illness. Participants in the current study suggested faith had a role in their trying to understand why the incident happened to them. Realizing they were no longer invincible struck a chord in some participants who suggested they would now become more active in their churches. One participant felt his trauma experience was necessary in order for him to become a better person and he credited things "*working in mysterious ways*" for his opportunity to change. Viewing the experience as an opportunity for change, reinforced participants' beliefs they would get out of the ED. No literature was found directly related to spiritual coping strategies in patients experiencing trauma resuscitation or to vulnerability.

I appreciate things

Surviving the trauma was a 'wake-up call' for participants. A period of reflection allowed them to view their world through a new lens. The traumatic event has been identified as a starting point for patients to begin recovery post injury (Richmond, Thompson, Deatrick, & Kauder, 2000). Richmond et al. (2000) interviewed 63 trauma patients 2.5 years after their serious injury and identified three themes: event, fallout, and moving-on. The traumatic event is described as a defining moment in patients' lives as they are faced with their own mortality. Believing they might have died, patients begin to examine what their life means to them. Fallout is the phase when patients begin to realize the effect the event and injury has had on their life, such as a return to modified work or an appreciation for what they are able to do. In the final stage, moving-on, patients use their inner and external resources toward recovery. Overall, Richmond et al. suggested that patients had a "renewed appreciation for life, for living life, and for making the most of

life” (p.1346). This finding is consistent with the current study in which participants expressed an appreciation of things, like the generosity of others and how quickly life can change post injury. As well, participants viewed their world with a new sense of self-awareness. For example, they had learned that they have a purpose in life, that others need them. It is as if they are suddenly noticing things that were always there but now take on a new importance. One participant described how his perception of work colleagues had changed – that he now had friends he never knew he had. This participant also suggested his experience would serve as an impetus for him to make changes in his life such as wanting to start to go to church. Perhaps the experience of trauma resuscitation provided individuals with an opportunity to make changes in themselves and in their lives as a result of trying to understand or find meaning in what happened to them.

5.6 Summary of discussion of findings

The current study’s findings have contributed new knowledge to the understanding of the experience of trauma resuscitation in the ED from the patients’ perspective. Participants’ descriptions of their experience began with the actual event and finished their return home. This suggests that the experience of trauma resuscitation is not limited to the ED for patients.

The overwhelming description of the experience was that it was positive. In fact one participant stated *“It has been a bad experience for my body and it has been a good experience” (Sam)*. A major reason that the overall experience was positive is due to the fact that participants remember it as one in which they felt safe. This feeling of being safe, as described by participants, contributed to a decrease in feelings of vulnerability.

Despite the fact that participants expressed perceptions of vulnerability after the injury, and when they initially arrive in the ED, system factors such as an organized trauma team response helped to alleviate them. The models of vulnerability developed by Lessick et al. (1992) and Rogers (1997) both suggested vulnerability is based on the interaction between the environment and the individual. Rogers' model rests on the assumption that vulnerability is based on the relationship between personal and environmental factors while Lessick et al.'s model considers an individual a vulnerable system with different dimensions (eg: biological) and the relationship between the individual and the environment affects vulnerability. Although this study has identified environmental factors that affect vulnerability, such as a clearly identifiable leader during trauma resuscitation, personal factors were not remarked upon by participants in detail. The current study has demonstrated that vulnerability is based on participants' perceptions and this is not addressed in the models of vulnerability to date. Both models, however, do suggest vulnerability is continuum based and this is evident in the current study. Consequently, future research is necessary to examine the experience of trauma resuscitation and the influence of system factors on perceptions of vulnerability.

5.7 Implications for practice, education, research, and the role of the APN

Implications of the study findings will be discussed in this section. The focus will be on suggestions for nursing practice, education, and research in trauma care. This section will conclude with the role of the Advanced Practice Nurse (APN) in trauma.

5.7.1 Implications for nursing practice

The importance of communication in patients' experience of trauma resuscitation has implications for nursing practice. Communication between patients and trauma team members is best achieved through the continuous presence of one easily identifiable key contact. A primary nurse, or as suggested by Watts et al. (1998), an exclusive one-on-one psychological support/communications nurse, has an opportunity to be that one key contact for the patient. This nurse can act as the connection between patient and family, patient and staff, patient and process. Knowing a staff member by name and understanding they are easily and quickly accessible adds to the sense of caring. In the current trauma protocol at TOH, Nurse 2 and Nurse 3 are assigned to the bedside. The roles could be modified to assign one of them to be the key contact for the patient during the initial resuscitative phase. As the patient stabilizes, and Nurse 2 and 3 are able to return to their other duties, Nurse 1 would assume this responsibility. It is imperative nursing management in institutions value and encourage this supportive/communications role of the clinical nurse in trauma care.

Initial words of staff members were significant in defining participants' experience. It is this initial contact that conveys a sense of efficiency and caring to the patient and sets the tone for future interactions. Nurses can combine clinical assessment and communication. For example, looking into the eyes of the patients to determine whether or not they are alert is an opportunity for communication as is feeling for a radial pulse and gently grasping a patient's hand. Although simple in nature, these methods of communication do positively influence a patient's experience. Morse and Proctor (1998) suggest that a nurse assuming the role as communicator and comforter will help a patient

stay in control, therefore, procedures and assessments can be completed by staff in a timely fashion as they will not have to focus their energy on managing someone who is out of control.

The use of touch as well as soothing tone of voice was also identified by participants as key factors that positively influenced their experience. Touch is predominately purposeful in initial trauma resuscitation, as the physiological needs of the patient take precedent, but yet it can still be perceived as an expression of caring if it is not rushed or rough in quality (Perry, 1998).

Hawley (2000) identified immediate and competent technical/physical care, positive talk, vigilance, attending to physical discomfort, and including family as five comforting strategies nurse can employ. These strategies, with the exception of attending to physical discomfort, are reflected in the current study findings as they relate to feeling safe. Hawley (2000) further suggested that if comfort care is provided, it will not be noticed by patients when implemented effectively. The significance of these comfort measures must be recognized as valuable so that they can be incorporated into everyday practice.

The current study findings clearly reinforce the work of others who have demonstrated that ED patients like to be informed (Hostutler, Taft, and Snyder, 1999; Jay, 1996). During trauma resuscitation, nurses can provide informational support such as letting patients know several people will be surrounding them or giving an update on the plan of care. Emotional responses of patients should be discussed if appropriate. Updates to family and/or friends are also important and would encompass the holistic perspective of resuscitation put forth by Timmermans (1997).

A major finding of this study was the critical importance of an organized and systematic approach to trauma resuscitation and how essential it is to patient perceptions of feeling safe and, as a result, not vulnerable. It is imperative that refinement of the trauma resuscitation system and related policy, protocol and procedures be ongoing to ensure optimum practice.

Consideration must be given to the composition of members of the trauma resuscitation team. Current trauma systems have clearly defined roles for nurses, physicians and allied health care professionals. As the recipient of the trauma resuscitation, the patient is not considered a member of the trauma team. A significant finding of the current study is the importance of involving the patient. Being involved was a positive experience for participants because they felt they were actively contributing to their own care. Participation ranged from being able to answer questions to being given a task, such as “breath, keep breathing,” on which they could focus. Nurses are ideal members of the trauma resuscitation team to encourage patients to take an active role in their resuscitation if appropriate and if they are willing. Patients who are provided with a task, such as “take slow breaths,” may be better able to maintain control.

Sensitization of trauma team members to the patients’ experience of resuscitation will have implications for care delivery. Nurses, as key members of the trauma team, must be able to identify modifiable factors that will minimize vulnerability. This study has demonstrated that nurses, in their initial contact with trauma patients, can establish feelings of being safe. Consequently, nurses must be aware of the power of this first contact on patients’ perceptions of vulnerability.

Clinical nurses have an important role in taking the lead in a review of relevant policy and procedures related to trauma care and the trauma system. A noteworthy practice issue identified in the current study, that has implications for nursing, is the frustrations perceived by the participants. Memories of being frustrated in the ED were primarily the result of feeling disconnected from family and/or friends, the presence of police at the bedside, and being on the backboard. For example, if there was no current policy related to police presence at the bedside, when patients are not in custody, nurses could take the lead in ensuring one is developed. Nurses should be involved in the development of clinical guidelines to remove patients from backboards as soon as possible in order to minimize pain, discomfort, and possible skin breakdown.

The study findings have implications for nurses who care for trauma patients once they are admitted to hospital. In the current study, two participants described what may have been near death experiences (NDE). Manley (1996) suggests that, first and foremost, nurses must be receptive to the possibility that patients did have NDE. Second, they must be attuned to the signs indicating patients had a NDE and then assist them in integrating the experience into their trauma experience as a whole. For example, other ways that nurses can contribute to caring for patients who may have a NDE, according to Manley, is to always talk to and touch patients during cardiac arrest and let them know they are not alone.

Post trauma resuscitation nurses are in an ideal position to help patients understand their illness by allowing them to talk about their dreams or recollections (Richman, 2000). Clinical care should encompass listening to patients' experiences of the event as well as

offering reassurance and helping patients to use their own coping strategies so that they will return to their pre-injury psychological health (Butler, Moffic, & Turkal, 1999).

Caring for trauma patients is not exclusive to the hospital environment. As this study has indicated, sequela from traumatic injury such as PTSD does extend beyond the walls of a trauma centre. Nurse practitioners and family physicians have a valuable role in identification of symptoms of PTSD and educating patients about it (Butler, Moffic, & Turkal, 1999). Knowledge related to PTSD is important for clinicians in the hospital setting as well as they have a key role in identifying patients who may develop symptoms and require intervention.

5.7.2 Implications for education

Clinical Staff Education

Trauma care occurs along a continuum from injury, to pre-hospital care, the ED resuscitation, ICU/OR/Trauma Unit admission, in-patient, rehabilitation, and finally return to optimal family and work life. Nurses must be aware that what they do with patients in one area, such as the ED, may have an impact on patients' experience in another. Therefore, an overview of the trauma system should be incorporated into orientation and continuing education sessions in all clinical areas that manage patients with traumatic injury.

However, specific education is also required. For example, in-service education about NDE in the ED may focus on the importance of touch and talk to patients who appear unconscious while in the Trauma Unit, the focus would be on how to discuss the experience with patients. ENA (1997) recommends a minimum of six hours per year of

continuing education for nurses caring for trauma patients. In addition, the ENA suggest skill- based competency validation on an annual basis.

Optimal care is provided to patients as part of an organized trauma system (ACS, 1998). The Trauma Nursing Coalition recommends that the components of this system should include trauma-related orientation, credentialing, continuing education, and competency validation (ENA, 1997). This author suggests that since trauma care involves specialty areas, such as ED, ICU, and the Trauma Unit, unit-specific care of the trauma patient, as well as an overview of the trauma system, should be included as part of orientation. A trauma system involves multi-disciplinary team members, therefore orientation and continuing education sessions should be extended to the multi-disciplinary team, such as with residents and attending staff physicians.

Familiarity of trauma team members with each other was prominent in participants' recollections of their experiences. Patients derived a sense of security from hearing trauma team members refer to each other by name. Patients had an expectation that a trauma centre meant staff "*do this all the time*" hence they must be familiar with each other and used to working together. Knowing each others names provided patients with the proof they required to feel safe and secure in the hands of an expert team who knew what they were doing. New members of the trauma team, whether a new ED nurse or a new TTL, should be welcomed and formally introduced to other team members, for example during rounds.

Participants' descriptors of pain suggested they experienced severe discomfort during trauma resuscitation. A comprehensive education program for staff on pain management for patients with serious injury may address any knowledge deficits or barriers to effective

pain management (Brown, Bowman, & Eason, 1999). An education program should also recognize commonly used devices, such as backboards or tubes, as potential sources of pain that require assessment (Stanik-Hutt et al., 2001). A pain management protocol could be developed to guide staff in the provision of analgesia.

Educational sessions based on psychosocial aspects of trauma care will heighten knowledge and complement physiologically oriented care. This study highlights patients' belief they will survive. Participants clearly stated the importance of staff telling them they would be all right and their need to believe it to be true. Ongoing education emphasizing the importance of a sense of hope for seriously injured patients is necessary. As well, the findings of this study suggest that the experience of trauma resuscitation has meaning to patients and that the participants enjoyed sharing the story of their experience. Allowing patients to share their experience is one way nurses can provide psychosocial care. The provision of such care is both a responsibility and a gratifying experience in trauma nursing (Lenehan, 1986).

The ENA (1997) recommends that injury prevention be part of outreach education but this author suggests that injury prevention can be and should be incorporated into clinical care. The participants in this study were injured from either falls or MVCs. Clinical nurses have an opportunity to delve beyond the broad mechanism of injury and discuss the specific details with patients. The results of a deeper inquiry into how the incident occurred will provide the nurse with an opportunity to educate patients and their families in injury prevention. An understanding of the concept of vulnerability is especially important in injury prevention as education must address learners who may perceive themselves as invulnerable. This focus is important when one considers the high rates of trauma

recidivism (Cydulka et al., 1998; Keough et al., 2001). Injury prevention must include families so that any mitigating circumstances that resulted in injury may be addressed by both patients and their broader support networks.

Patient Education

Informational needs of the patient must also be considered, specifically, explanations for process and procedures. This study revealed patients' desire to know what was taking place. For example, one participant commented that when nurses gave clear direction, such as 'we are going to turn you on your right side', she was able to assist staff. This same participant stated that if she had not been given explicit direction and not been prepared to turn on her right side she may have resisted staff's attempt to turn her. Nurses must not underestimate the value of concurrent explanation during procedures.

This study also illustrates the importance of patients re-telling their story. Participants have an interest in wanting to understand the event and subsequent trauma resuscitation in the ED. Re-telling of the events provides an opportunity for staff to provide explanations to patients and this may be most appropriately met after they have had an opportunity to reflect on their experience post ED. In addition, this opportunity for staff to help 'fill in the blanks' and allows patients to develop memories of their experience that will have meaning for them (van der Kolk, Burbridge, and Suzuki, 1997). What is less clear is who patients should tell their stories to – nurses, physicians, social workers?

Formal Education

This study highlights the important of behaviours demonstrated by staff such as tone of voice, touch, and presence. The development of a formal academic course on 'comfort

nursing' or 'comfort care' may be of interest to nurses caring for trauma and other patient populations. Kolcaba (2001) suggests that nurses are able to meet patients' comfort needs when they are in stressful health care situations. Certainly patients and families would benefit by such a course and this author suggests that nurses would also benefit from this type of content in a formal academic institution as it may legitimize the value of comfort care in practice. Discussion of research findings and theories of comfort care (Cydulka et al., 1998; Fareed, 1996; Hawley, 2000; Jay, 1996; Kolcaba, 2001; Morse & Proctor, 1998; Penrod et al, 1999) move it beyond the 'nice to do' into the 'necessary to do' category of care.

5.7.3 Implications for trauma research

The ENA (1997) has identified several ways nurses can participate in trauma research. These include: co-investigator or member of a multi-disciplinary team, as content expert to researchers, assisting in data collection, or as research subjects. In addition, it is essential that nurses utilize research in the care of trauma patients. For example, clinical guidelines should reflect current research findings. Journal clubs and conference attendance are other ways of staying current with research and its findings.

This study has also identified several specific suggestions for trauma research that are worthy of consideration. Specific areas for future trauma related research include:

- 1) The need for research related to pain assessment and pain management practices as well as patients' perceptions of pain. To date, most research on pain management has excluded the trauma population.

- 2) Exploration of alternative methods of generating feelings of connection to family and/or friends for trauma patients. Questions that could be researched include; “What is the optimal role of the nurse in facilitating a connection between patients and family/friends?” and “What are the realities of professional support in the environment of current fiscal constraints in health care and in the context of the overriding need to manage physiological imbalance?” Further exploration to determine whether patients want family/friends present during trauma resuscitation is wanted.
- 3) Research related to trauma systems and the impact of an organized approach in trauma resuscitation is required. In particular, there is a need to explore what trauma team members do that affects participants’ feeling safe. Specifically, what do team members do that contribute to perceptions of efficiency and caring or minimize perceptions of vulnerability? Related studies on how to sustain this given the constant influx of new staff is also necessary.
- 4) Further investigation into perceptions of vulnerability in seriously injured patients is necessary in order that interventions can be developed. In the current study, participants initially felt vulnerable on arrival but that this subsided with staff efficiency and caring. However, the return visits to the participants suggested that feelings of vulnerability may reoccur once home.
- 5) A few participants in this study described nightmares and flashbacks. Research on the incidence of PTSD in traumatically injured patients is necessary to determine its presence and to assist with development of interventions.
- 6) Injury prevention (IP) strategies must be developed and then effectiveness formally evaluated in adult populations. Given that the injuries sustained by some of the

participants in this study may have been preventable, for example drinking and driving, formal IP strategies may be beneficial. To date, prevention strategies have targeted children and adolescents. One established IP program is Prevent Alcohol and Risk Related Trauma in Youth (P.A.R.T.Y), a full day program in which youth age 15 to 18 learn about risk related behaviors, witness a mock trauma resuscitation, tour the ED and ICU and hear first hand what trauma resuscitation is like from an injury survivor. Perhaps a modified adult P.A.R.T.Y program would be of benefit.

7) Trauma as an impetus for change. This study has revealed patients belief that the experience of trauma resuscitation has altered their lives, that the experience is the impetus for change. A future study could determine if participants did in fact make changes in their lives after discharge. The sustainability of any change would also be of interest.

5.7.4 The role of the Advanced Practice Nurse (APN)

The five primary functions of the APN are i) expert practice, ii) consultant, iii) research, iv) leadership, and v) educator (Hamric, Spross, and Hanson, 2001). This section will focus mainly on the role of an APN in the context of the ED. In order to fulfill these functions, commitment to an APN role in trauma care is necessary from the level of the clinical nurse to senior management.

Expert Practice

The APN has a role to develop interest, skills, and knowledge related to trauma nursing. One principal role would be clinical practice. Clinical practice has many possibilities: the APN could provide direct care to complex trauma patients in hospital or provide indirect clinical care by supporting and mentoring staff nurses caring for seriously injured patients.

The APN is a mentor to staff since he/she demonstrates organizational and leadership behaviour while providing trauma related care.

Discharge planning for complex trauma patients can begin in the ED with a basic assessment of patient and family needs and resources. The APN would then work collaboratively with the multi-disciplinary team with the goal to ensure adequate support, rehabilitation and follow-up in order to reduce any sequela associated with injury. The APN has a role in reducing the length of stay (LOS) of trauma patients in hospital as well as decreasing morbidity (ENA, 1997). For example, the APN could audit barriers to clearing C-spines. Strategies to manage the barriers, such as development of multidisciplinary guidelines for clearing C-spines in trauma patients, could be developed. Follow-up of LOS would be necessary.

The Trauma APN position would have a role as patient and family advocate. The APN would communicate his/her point of view/concerns to stakeholders to ensure appropriate and holistic care. This is especially important in complex patient situations where skill, diplomacy, and creative alternatives for problem solving must be explored.

The trauma APN has a role in assessing, effecting change and ensuring evaluation of change in organizational structure and policies that will have an impact on the trauma population.

Research

The APN has a role to support evidence-based practice in trauma care. Involvement in original research and support of other trauma related research is an integral part of the APN role. Activities like journal club and in-services to discuss trauma related research and its relevance to current practice can be coordinated by the Trauma APN. Policy and

procedures must reflect current evidence-based research and the APN has a key role in ensuring a system is in place for this to occur. Consequently, the APN has a role to translate research to practical applications at the bedside.

Collaborative research with multi-disciplinary partners in trauma related research is a vital role of the APN. This is especially relevant in the trauma population because trauma crosses many disciplines and specialties.

Consultant

Trauma patients often have complex injuries and social issues. Consequently, the APN can provide consultation to clinical nurses, managers, educators, physicians and other allied health care professionals regarding trauma system and patient care issues.

Consultation may be formal or informal. For example, an informal consult may be generated by the clinical nurses at the bedside.

The consultant role extends beyond the confines of the trauma team to the organization as a whole. The APN may be consulted by administrators in an institution to recommend changes in policy and procedure of trauma care or trauma systems. In addition, the APN may consult with community partners, for example, as a committee member for a local injury prevention coalition. The APN could work collaboratively with key stakeholders to develop a policy for police presence at the bedside in the ED specific to patients not in custody. This is supported by the current study findings that participants were distressed by police presence during resuscitation as well as the fact that there was no policy in place in the ED.

The consultant role of the APN extends beyond the hospital setting. The APN could consult with patients and their families once they return to the community. In addition, the

APN may consult with, or be consulted by, family physicians, insurance companies and other community partners.

Educator

As an educator, the APN can plan, develop, and implement health teaching resources and tools for staff, patients, and families. For example, one participant suggested he would have liked to look in an anatomy book to better understand his injuries. Visual teaching aids could be developed to use with patients to help them understand their injuries.

In this study, participants suggested that not knowing contributed to their sense of being scared. As an educator, the APN has a role in developing strategies to facilitate clinical nurses' abilities to incorporate the informational needs of the patients into the provision of care. Strategies must include assessment of perceived barriers and suggestions for ways nurses can provide patients with information during trauma resuscitation. Methods for incorporating the exchange of information into practice must be addressed in order for it to become part of the routine practice of nurses caring for trauma patients. This is especially important in the initial phase of the resuscitation, in order to augment feelings of being safe and minimize perceptions of vulnerability, as demonstrated in this study.

Leader

The APN could provide leadership in the ongoing development, implementation, and evaluation of the trauma system. Seamlessness of care was identified by participants as contributing to their feeling safe; thus, the APN is an ideal health care professional to ensure these aspects of care provision. Participants in this study identified the backboard and hard cervical collar as a source of both pain and frustration. Development of a clinical pathway or clinical guidelines to clear the spine and subsequent removal of the hard collar

and backboard are necessary. The APN could take the lead in organizing a multi-disciplinary group to develop such a protocol or pathway within his/her institution. A standardized approach to clearing spines has been demonstrated to be effective (Pierce & March, 1996).

Currently there are no national standards for the care of trauma patients. The APN has an opportunity to take the lead in proposing the development of national trauma care standards with the Trauma Association of Canada.

5.8 Conclusion

This qualitative study provided insight into nurses understanding of the patients' experience of trauma resuscitation in the ED. Although trauma is defined by ENA (2000) as a major threat to health, this study has demonstrated that the participants' experience was positive and one in which they felt safe.

For the seven participants, the experience of trauma resuscitation was not confined to the ED but rather, as indicated in the follow-up interviews, continued once they returned home. Analysis of the participants' recollections of the trauma resuscitation were clear and detailed and revealed four themes: *I Remember*, *I Was Scared*, *I Felt Safe*, and *I Will Be OK*.

Each participant was able to describe the mechanism of their injury and some of the pre-hospital care they received. As well, they had memories of feelings of frustration that were related to a variety of events and actions outside of the physical priorities of the trauma resuscitation. As part of the initial process of trauma resuscitation, when trauma team members were focused on the ABCD aspects of care, participants described being scared

based on feelings of shock and pain, being alone, and the unknown. Being scared was associated with being vulnerable.

However, very quickly into the resuscitation, trauma team members were able to convey clinical competence and caring to the participants. It was this combination that produced a feeling of being safe in participants. Participants perceptions of being safe were strengthened by these actions of staff and subsequently perceptions of vulnerability diminished. The belief that they would survive their injuries and be OK is closely related to feeling safe.

There is little doubt that participants' perceptions of being safe were directly related to the process of trauma resuscitation. System factors, such as a clearly identifiable TTL, were of paramount importance to participants and contributed considerably to the overall belief that it was a positive experience. Participants also described low tech interventions such as staff rubbing their arm (touch) or being told repeatedly "you're doing fine" (they way they talked) as "*lifelines*." These caring behaviours contributed to the feeling of being safe and not vulnerable. This corresponds to Lessick et al. (1992) statement that nursing interventions can affect vulnerability. It also supports the necessity of moving research findings and theories of comfort care (Cydulka et al., 1998; Fareed, 1996; Hawley, 2000; Jay, 1996; Kolcaba, 2001; Morse & Proctor, 1998. Penrod et al, 1999) from the 'nice to do' realm to the forefront of trauma nursing care.

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Appendix A: Data collection sheet for potential participants

Data Collection Sheet for Potential Participants

Name:

Age:

Room number:

Diagnosis:

Mechanism of injury:

The following answers must be YES for the patient to be considered potential participant in the study:

Trauma code in the ED:	Yes	No
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Glasgow Coma Scale in ED greater than or equal to 13:	Yes	No
--	------------	-----------

Revised Trauma Score greater than or equal to 10:	Yes	No
--	------------	-----------

English speaking:	Yes	No
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Patient consents to have Trauma coordinator (or designate) provide their name to the researcher:	Yes	No
---	------------	-----------

If yes, researcher notified of potential participant:	Yes	No
--	------------	-----------

If no; this form will be disposed of by the Trauma Coordinator (or designate).

Appendix B: Study information/consent sheet



The Experience of Trauma Resuscitation in the Emergency Department
A Patient Perspective

Information/Consent Form

Principal Investigator: Jo-Anne O'Brien RN, MScN (student)
School of Nursing, University of Ottawa
(613) 562-4785

Supervisor: Dr. Frances Fothergill-Bourbonnais RN, Ph.D
School of Nursing, University of Ottawa
(613) 562-5800, ext. 8423

Reason for Study.

I am a Registered Nurse in the Master of Science in Nursing (MScN) program at the University of Ottawa. I am conducting a study to gain understanding of your experience in the emergency department. Your comments may serve to increase nurses understanding of patients' experience when admitted to the emergency department after a traumatic injury. This information is provided for you to decide whether you wish to participate in the study.

What is involved.

The Trauma coordinator, John Trickett, has determined that you are eligible to participate in this study. In order to determine if you are interested, you consented to providing the researcher with your name and allowing the Trauma Coordinator (or designate) to provide medical information from your emergency department chart as it relates to your injury; for example your admitting diagnosis and trauma score.

Two (2) tape-recorded interviews will be conducted. The first interview will be approximately 60 minutes long. You will be asked to describe your experience and feelings from the time that you entered the emergency department until you left the emergency department. The tape and your comments will not be shared with the nurse or doctors. The final paper may contain anonymous quotations.

A second interview of approximately 20-30 minutes may be requested. The second interview is to determine whether you agree with how the researcher has understood your experience. The second interview will take place within 5 months and will coincide with a clinic appointment, take place in hospital or at your residence if you live within 30 km. of the hospital.

Risks and Benefits.

We do not anticipate any risks for people who participate in this study. However, if you begin to feel distressed at any point during the interview please ask the researcher to stop the interview. Also, if there are any questions you do not wish to answer, just tell the researcher to skip the question.

There may be no direct benefit to you as a participant of this study, but the information you share may lead to a deeper understanding of what it is like to be a trauma patient in an emergency department. Also, some people find it helpful to talk about their experiences in the emergency department.

Voluntary Participation.

Your participation in this study is voluntary. This study is not related to your current care in hospital. You are free to withdraw at any time without prejudice to your medical and nursing care at present or at any time in the future.

Confidentiality.

Any identifying information, such as your name, will not be given to maintain confidentiality; pseudonyms will be used on the interview transcript. Jo-Anne O'Brien will keep a list of participants' names with pseudonyms and signed consent forms in locked files. Only Jo-Anne O'Brien will have access to your identity. Only the student's thesis committee will have access to your data, which will have a code number and a pseudonym. Your identity will not be disclosed in any published findings of the study. All tapes will be kept for two years after the interview at which time they will be destroyed by the researcher.

Copy for Participants.

All participants will receive a copy of this information/consent form and the study researcher.

Contact People.

If you wish to receive more information about this study, or have any questions, whether before or after the interview, you can contact Jo-Anne O'Brien at 562-4785. You may also contact the researcher's thesis supervisor, Dr. Frances Fothergill-Bourbonnais, at the School of Nursing, University of Ottawa at 562-5800, ext. 8423. The Ottawa Hospital Research Ethics Board has approved this protocol. This board considers the ethical aspects of all hospital research projects using human subjects. You may talk to the Chairperson of the Research Ethics Board at 761-4902 if you have any questions about your rights as a research subject.

SIGNATURES.

By signing this consent form, I agree to participate in the research project describes above and was given a copy of the Information /Consent form.

Signature of Participant

Date

Name (printed)

The information within this consent has been explained to the participant, and to the best of my knowledge, the participant understands the nature of the study and the risks and benefits involved in the study.

Signature of Participant

Date

Name (printed)

Appendix C: Letters of support



Denise Belanger
Clinical Director, Surgery
The Ottawa Hospital

June 21, 2000

Dr. Raphael Saginur
Chair, The Ottawa Hospital Research Ethics Board

Dear Dr. Saginur,

This letter is in support of the MscN student thesis proposal "The Experience of Undergoing Trauma Resuscitation in the Emergency Department - A Patient Perspective", submitted by Jo-Anne O'Brien.

The experience of patients who have undergone trauma resuscitation in the emergency department is timely and worthy of study. The student research work will be completed under the guidance of a three-member thesis committee, chaired by Dr. Frances Fothergill-Bourbonnais from the School of Nursing, University of Ottawa.

Sincerely,

Denise Belanger
Clinical Director, Surgery,
General Campus



July 20, 2000

Dr. Raphael Saginuer
Chair, Research Ethics Board
The Ottawa Hospital

Dear Dr. Saginuer,

I am writing to express my support of the thesis proposal "The Experience of Trauma Resuscitation in the Emergency Department – A Patient Perspective", which is being submitted for approval to the Ethics committee, by Jo-Anne O'Brien, a M.Sc.N student from the University of Ottawa.

The student research work will be completed under the guidance of a three-member thesis committee, chaired by Dr. Frances Fothergill-Bourbonnais from the School of Nursing, University of Ottawa.

Sincerely,

Pam Bush
Clinical Director, Surgery Portfolio
The Ottawa Hospital,
Civic Campus

Wendy Fortier
Nursing Director, Critical Care
The Ottawa Hospital.

June 21, 2000

Dr. Raphael Saginur
Chair, The Ottawa Hospital Research Ethics Board.

Dear Dr. Saginur,

This letter is in support of the MScN student thesis proposal "The Experience of Undergoing Trauma Resuscitation in the Emergency Department – A Patient Perspective", submitted by Jo-Anne O'Brien.

The lived experience of patients undergoing trauma resuscitation in the emergency department is timely and worthy of study. The student research work will be completed under the guidance of a three-member thesis committee, chaired by Dr. Frances Fothergill-Bourbonnais from the School of Nursing, University of Ottawa.

Sincerely,



Wendy Fortier
Nursing Director, Critical Care

John Trickett, RN, BScN
Trauma Coordinator
The Ottawa Hospital.

June 21, 2000

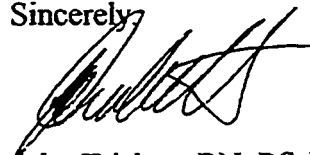
Dr. Raphael Saginur
Chair, The Ottawa Hospital Research Ethics Board.

Dear Dr. Saginur,

This letter is in support of the MScN student thesis proposal "The Experience of Undergoing Trauma Resuscitation in the Emergency Department – A Patient Perspective", submitted by Jo-Anne O'Brien.

The lived experience of patients undergoing trauma resuscitation in the emergency department is timely and worthy of study. The student research work will be completed under the guidance of a three-member thesis committee, chaired by Dr. Frances Fothergill-Bourbonnais from the School of Nursing, University of Ottawa.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Trickett', with a stylized flourish at the end.

John Trickett, RN, BScN
Trauma Coordinator

Dr. Alan Giachino
Division Head, Orthopedic Surgery
The Ottawa Hospital.

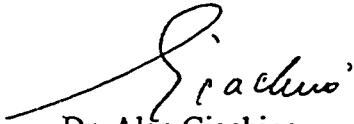
July 5, 2000
Dr. Raphael Saginuer
Chair, Research Ethics Board
The Ottawa Hospital

Dear Saginuer,

This letter is in support of the MScN student thesis proposal "The Experience of Trauma Resuscitation in the Emergency Department – A Patient Perspective", submitted by Jo-Anne O'Brien.

The lived experience of patients undergoing trauma resuscitation in the emergency department is timely and worthy of study. The student research work will be completed under the guidance of a three-member thesis committee, chaired by Dr. Frances Fothergill-Bourbonnais from the School of Nursing, University of Ottawa.

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Giachino", written in dark ink.

Dr. Alan Giachino
Division Head, Orthopedic Surgery
The Ottawa Hospital.

Dr. J.D. Yelle
Director, Trauma Services
The Ottawa Hospital.

June 21, 2000

Dr. Raphael Saginur
Chair, The Ottawa Hospital Research Ethics Board.

Dear Dr. Saginur,

This letter is in support of the MScN student thesis proposal "The Experience of Undergoing Trauma Resuscitation in the Emergency Department – A Patient Perspective", submitted by Jo-Anne O'Brien.

The lived experience of patients undergoing trauma resuscitation in the emergency department is timely and worthy of study. The student research work will be completed under the guidance of a three-member thesis committee, chaired by Dr. Frances Fothergill-Bourbonnais from the School of Nursing, University of Ottawa.

Sincerely,



J.D. Yelle
Director, Trauma Services

Appendix D: Demographic profile data sheet

Demographic Profile Sheet.

Participant Code Number:

Pseudonym:

Age:

Gender:

Occupation:

Phone # for follow-up:

History of injury (as per patient):

Resources (e.g. family, clergy) identified by patient:

Hospital experiences:

Appendix E: Interview guide

Interview Guide

Central Question:

Tell me about what it is like for you during the time you spent in the ED.

Sub questions:

Tell me about what made your ED experience easier for you.

Tell me about what made your ED experience difficult for you.

Tell me about what kinds of things helped you through this experience.

Tell me about any feelings and emotions you experienced.

Tell me about..... and What was it like for you? will be used in follow-up to participants' comments.

Vulnerability questions near end of interview:

Can you tell me what the word vulnerable means to you?

Did you feel vulnerable in the emergency room?

Appendix F: Contact summary sheet

Contact Summary Sheet.

Participant Code Number:

Pseudonym:

Interview date:

Starting time:

Ending time:

Location of interview:

Description of environment:

Non-verbal behavior:

Content of interview (key words, topics, focus, exact words):

Researcher's impressions (discomfort of participant regarding certain topics, emotional responses):

Analysis:

Technical problems (e.g.: tape recorder):

Appendix G: Preliminary codes from data analysis

Preliminary Codes from Data Analysis

Themes	Categories
Feeling safe	• Niceness • Reassurance • Comfort • Patient knowledge • Trust • Communication • Laughter
Sensory experience	• Physical shock • Emotional shock • Touch • Pain • Feeling alone • Presence of trauma staff • Presence of familiar people • Being awake and aware • They way they talked
Sense of time	• Pre-hospital time • Meaning of time to patient versus staff • Patient keeping track of time • Time for care • Non-ED time
Turning point	• It was an eye-opener • Death and dying • Change in outlook on life
Control	• Patient feeling they have control • Rationalizing staff behavior • Pre-hospital tasks • ED tasks • Visitors at the bedside • Patient worries • Organization • Teamwork • Control over body