Critical Care Clinical Case Study  
NURS 451- Clinical Management of Adult Health Nursing III

Purpose of Assignment  
The purpose of this case study is to integrate knowledge from the humanities and sciences, including nursing research and theory, to plan, provide, and evaluate holistic care provided to a client selected during this clinical rotation.

Student Approach to the Assignment  
This assignment required an exploration of different nursing aspects related to the care provided for an ill or injured patient in the critical care setting. The patient studied for this assignment was an 83-year-old male who was critically injured after being struck and run over by a construction backhoe. This patient received significant crush injuries, and he suffered several other subsequent medical issues as a result of the incident. As the length of time he spent in the ICU grew longer, his medical problems became increasingly complex, and his health became increasingly unstable. This case study explored the medical and nursing diagnoses associated with this patient, it identified expected outcomes and nursing interventions specific to his health situation, it evaluated his nursing plan of care, and it identified research that was relevant to his medical issues and the treatment he received.

Reason for Inclusion of the Assignment in the Portfolio  
This assignment is included in the portfolio because it explores a multitude of concepts related to the nursing care of a critically ill patient in the intensive care unit, and because it demonstrates a knowledge and understanding of critical thinking processes and complex care that don’t often arise outside of the critical care environment.

▶ Critical Thinking  
➢ Uses nursing and other appropriate theories and models to guide professional practice.
   ▪ Example: For this assignment, I used Faye Abdellah’s Patient-Centered Approach Theory to help prioritize patient health issues according to their degree of severity and potential for danger to the patients’ health. Abdellah’s theory advocates that a nurse use knowledge of 21 common nursing problems that have been derived from known medical diagnoses in order to solve patient health issues. Among these problems, risk for deficit fluid volume and risk for infection were utilized in order to determine nursing treatment plans and interventions, including the nursing administration of fluid and blood replacement products, and the administration of pressure-controlling, and infection-fighting medications.

➢ Evaluates nursing care outcomes through the acquisition of data and the questioning of inconsistencies.
   ▪ Example: As part of this case study assignment, projected outcomes, interventions, and evaluations related to the patients’ progress were provided for the two leading health dangers facing the patient. This patient was at a continued risk for deficient fluid volume, as evidenced by a traumatic crush injury, pelvic hemorrhage, persistent hypovolemia, increased sodium levels, and decreased blood count levels. A desired outcome for this patient was that he maintain a systolic blood pressure of 90 mmHg or higher, or a mean arterial pressure of 60 mmHg, in the absence of further bleeding,
and without fluid or vasopressor support. However, assessment of his blood pressure, perfusion state, and lab values revealed that the patient continued to remain unstable, and he needed to receive over 17 units of blood products over the course of three days, in addition to receiving continuous fluid and vasopressor support, in order to maintain his blood pressure and perfusion, and ventilator support to maintain his airway and respiration.

- Revises actions and goals based on evidence rather than conjecture.
  - Example: The same situation applies here – An initial plan to wean the patient from excessive fluids and vasopressors failed, as the patient was deemed to unstable to be weaned from these items based on his blood pressure, perfusion state, and lab values. Instead, the patient actually needed continuous fluid and vasopressor support, in addition to over 17 units of blood products.

- Nursing Practice
  - Applies appropriate knowledge of major health problems to guide nursing practice.
    - Example: The patient examined for this case study suffered severe injuries as the result of being crush by a construction backhoe, and he ultimately suffered a number of other health issues secondary to his initial injury. At different times, the patient suffered from cardiopulmonary arrest, hypovolemic and septic shock, acute respiratory failure, liver and renal failure, and multiple traumatic crush injuries. Knowledge of all of these different medical conditions was utilized in the course of patient treatment when determining plan of patient care, and when performing nursing interventions, such as when utilizing fluid, vasopressor, and blood product administration in an attempt to maintain patient blood pressure in response to hypovolemic shock.
  - Establishes and/or utilizes outcome measures to evaluate the effectiveness of care.
    - Example: For this assignment, desired outcome measures were determined during the design of the patient’s care plan, and then actual outcomes were evaluated following nursing interventions in order to gauge the effectiveness of care. One nursing measure required that the patient maintain a systolic blood pressure of 90 mmHg or greater by utilizing blood loss control, fluid resuscitation, and medication administration. Despite utilizing these interventions in the course of patient treatment, the patient continued to have difficulties maintaining his blood pressure. Ultimately, the patient needed over 17 units of blood to stabilize his blood loss and maintain his blood pressure.

- Communication
  - Produces clear, accurate, and relevant writing using correct grammar, spelling, and punctuation.
    - Example: In all reality, these criteria could be met by any one of the papers that are used for this portfolio assignment. However, in the course of discussing the patient’s health issues during his stay in the ICU, this case study goes into exceptional detail while integrating a number of different aspects of nursing care in a clear and concise manner. This paper explores that patients history, the events leading up to his injury, his diagnosis for admission into the ICU, and the pathophysiology behind his injury and subsequent medical issues, while tying in formal nursing diagnoses, the patient’s
clinical path, outcomes and interventions, family teaching, cultural considerations, and a number of professional journal research findings.

- **Research**
  - *Applies research-based knowledge from the arts, humanities, and sciences to complement nursing practice.*
    - Example: For this case study, I utilized scientific research data related to the effectiveness of hand hygiene to support nursing practices utilized when caring for the patient discussed in this case study. Frequent hand washing has been demonstrated to be the most effective way to reduce pathogen transmission, and I followed this practice every time I entered and exited the patients’ room, and before I performed an assessment or intervention on the patient.
  - *Evaluates research that focuses on the efficacy and effectiveness of nursing interventions.*
    - Example: Research addressing the effectiveness of using bundle-like nursing protocols and checklists was utilized in order to help guide prospective interventions designed to reduce the risk of patient infection. Results from a 2011 study presented in the *Dimensions of Critical Care Nursing* emphasized the success of programs that reduced the time to first antibiotic, and ultimately reduced the length of patient hospital stay.