



---

## MANAGEMENT OF EMERGENCY NURSING CARE WITH EXCELLENT SERVICE FOR MS.H WITH SEVERE HEAD INJURY IN THE ICU OF H. ADAM MALIK HOSPITAL MEDAN CITY NORTH SUMATRA PROVINCE IN 2025

Deo Cristian Meliala<sup>1</sup>, Herna Rinayanti Manurung<sup>2</sup>, Dina Afriani<sup>3</sup>, Paska Triance<sup>4</sup>, Meta Lestari Br Barus<sup>5</sup>, Maria Magdalena Girsang<sup>6</sup>, Dewi Fatimahtuzzahroh<sup>7</sup>

<sup>1,2,3,4,5,6,7</sup>Sekolah Tinggi Ilmu Kesehatan Mitra Husada Medan

email: [2219144011@mitrahusadaac.id](mailto:2219144011@mitrahusadaac.id), [hernarinayanti@mitrahusada.id](mailto:hernarinayanti@mitrahusada.id),  
[dinaafriani@mitrahusda.ac.id](mailto:dinaafriani@mitrahusda.ac.id), [paskatriance@mitrahusada.ac.id](mailto:paskatriance@mitrahusada.ac.id),  
[2319144039@mitrahusada.ac.id](mailto:2319144039@mitrahusada.ac.id), [2419144052@mitrahusada.ac.id](mailto:2419144052@mitrahusada.ac.id),  
[2419201012@mitrahusada.ac.id](mailto:2419201012@mitrahusada.ac.id)

### ABSTRACT

Head injury is one of the most common emergency cases encountered in Emergency Departments (ED) and can lead to increased intracranial pressure and decreased consciousness. Prompt and appropriate nursing management, especially with a service-excellent approach, is essential to support patient recovery and prevent complications. Objective This scientific paper aims to describe the emergency nursing care management with a service excellence approach for Mrs. H, a patient with severe head injury treated in the Adult ICU of RSUP H. Adam Malik Medan. Method This is a descriptive case study involving one patient with severe head injury. Data collection was conducted through observation, interviews, and medical record reviews between April 25th and April 27th, 2025. The case focused on comprehensive nursing care processes including assessment, diagnosis, intervention, implementation, and evaluation. Results The main nursing diagnoses found were: ineffective spontaneous ventilation, risk of ineffective cerebral perfusion, and impaired physical mobility. Nursing interventions included respiratory monitoring, maintaining airway patency, positioning, collaboration for medical therapy, and continuous evaluation. Over three days of care, the patient's condition showed partial improvement but required ongoing intensive treatment. Conclusion The implementation of emergency nursing care with a service excellent approach in patients with severe head injury demands competent clinical skills, multidisciplinary collaboration, and continuous evaluation. Nurses play a vital role in managing clinical deterioration, ensuring airway support, monitoring neurological status, and supporting family education to optimize patient outcomes.

**Keywords:** Head Injury Severe, Emergency Nursing Care, Excellent Service, ICU, Hospital

### Introduction

Decree of the Minister of National Development Planning Number Kep.136/M.PPN/HK/12/2021 concerning the establishment of the National Action Plan for Sustainable Goals (SDGs) for 2021-2024 emphasizes that all parties, including government agencies and other stakeholders, are obliged to use this

document as a reference in the process of planning, implementing, monitoring, evaluating and controlling programs to achieve SDGs targets (Kementerian PPN/Bappenas, 2021). Based on Sustainable Development Goals (SDGs) number 3 which emphasizes the importance of ensuring healthy lives and promoting prosperity for all people at all ages

(Nations, 2024). One of the serious challenges in achieving this goal is the high number of Head Injury which often occurs due to traffic accidents, violence or work accidents (World Health Organization, 2023).

Head Injury is one of the emergency cases that is often found in the Emergency Room (IGD) (RI, 2022). Head Injury can cause changes in tissue function or structure which have the potential to result in brain hemorrhage (Maas, Andrew I.R.; Menon, 2022). Quick treatment is needed and one method that can be used is the administration of oxygen (O<sub>2</sub>). This study aims to evaluate the effectiveness of O<sub>2</sub> therapy on the hemodynamics of patients with moderate to severe head injuries in the emergency department (Simanjuntak, R.; & Sinaga, 2022). The method applied in this research is experimental practice with a one group pretest-posttest design (Samosir et al., 2023). The sampling technique uses a side accidental approach. Data were collected using observation sheets filled out before and after the application of O<sub>2</sub> therapy (Miller, 2024).

Head Injury can be categorized based on morphology, mechanism and severity. The Glasgow Coma Scale (GCS) is usually used to determine the level of injury. Distribution of severity levels for head injuries from GCS, mild (13-15), moderate (9-12), severe (3-8) (Thompson, R.; & Williams, 2022). Meanwhile, morphology includes various brain lesions, including diffuse injuries, hematomas, and contusions. Given that major problems including increased intracranial pressure, hemorrhage, and brain edema, can occur rapidly, prompt and appropriate treatment is essential in determining the patient's prognosis (Davis, L.; & Chen, 2024).

Occupational trauma causes head injuries. Throughout the world, every year there are 500,000 cases of head injury, where more than 10% of sufferers die before arriving at the hospital, and more than 100,000 people experience various levels of disability as a result of head injury (Simanjuntak, R.; & Sinaga, 2022). From data obtained through Basic Health Research, it shows that there are around 11,064 cases of Head Injury in Indonesia (Wicaksono, 2021). Based on the results obtained from basic health research, the prevalence of head injury data in North Sumatra reaches 10.33% (Kementerian Kesehatan Republik Indonesia, 2024). In the city of Medan, with prevalence data recorded at 8.98%, data from the medical record book shows that head injuries resulting from increased intracranial pressure in 2023 were 1 person in the emergency room and 135 people in 2024. In 2024, data showed that there were 13 people in the emergency room and 169 patients undergoing inpatient treatment (Dinas Kesehatan Kota Medan, 2024).

### Research Method

This type of case study uses a descriptive method or what is usually called a "method that reveals events or symptoms that often occur". This method includes literature studies that study, collect, and discuss data while analyzing the nursing process approach, which includes the processes of assessment, diagnosis, planning, implementation, and evaluation of nursing.

### Result

According to the SDKI (PPNI, 2017) the nursing diagnoses that arise in head injuries are Impaired spontaneous ventilation Impaired physical mobility

Nutritional deficit Risk of ineffective cerebral percussion Nursing intervention refers to specific actions carried out in response to the behavior that the nurse will implement. Based on the identified diagnosis, a nursing plan is then prepared based on the nursing diagnosis of hyperthermia in line with the disease process and intervention goals. After nursing actions have been carried out for three days, it is hoped that the problem will be resolved. Nursing implementation is the fourth step in the nursing process which is developed after the preparation of a nursing plan is carried out in accordance with the nursing interventions that have been prepared based on the diagnosis that has been confirmed (Santoso et al., 2022). Effective and safe implementation can guarantee nursing care provided to head injury cases.

## Discussion

Client Identity Assessment Name Mrs. H, Age: 50 years 1 month, Gender: Female, Address: Jl Bendungan Money Burning BI, No. Telephone: 085359951375, Marital status: Married, Religion: Christian, Ethnicity: Batak, Education: Bachelor's degree (S1), Length of work: Unknown, RM number: 00960212, Date of admission: 04-24-2025, Study date: 04-25-2024, Source of information: Family, Name of close family member who can be contacted: Mrs. J, Status: Child, Address: Pematang Siantar, Telephone No.: None, Education: High School, Occupation: None. Health history when admitted to hospital. The patient's family said that before being admitted to the hospital, the patient experienced a sudden loss of consciousness while the patient was resting and vomited 4 times but did not vomit. History of current illness

Main complaint: The family said the patient experienced decreased consciousness due to a fall while in the work environment resulting in an injury to Mrs.H head area. Before being taken to H. Adam Malik General Hospital, Mrs. Duration of complaint: Since before being taken to hospital, Quality of complaint: Patient experienced decreased consciousness.

Precipitating factors: Head Injury / Post Craniotomy, Aggravating factors: None, Efforts made: Taken to Pematang Hospital Vita Insani Hospital Pematang Siantar. Medical Diagnosis of ICH (Intracerebral Hemorrhage), Hypertension, Pnemonia, Chronic Kidney Disease. In the study, data analysis obtained 4 nursing diagnoses, namely 1) Spontaneous Impaired Ventilation DS: The family said that when the patient was called for loss of consciousness, no one answered DO: The patient appears short of breath and uses accessory muscles to breathe. PcO<sub>2</sub> Increases (19.4) PO<sub>2</sub> Decreases (191.4) SaO<sub>2</sub> Decreased (99.9) The patient's breath sounds crackles Ventilator installed Tracheotomy installed GCS COMA (E1M2V1) Ventilator ResultsRate:12 Peep:5 FiO<sub>2</sub>:100% Vital signs RR:34x/I HR:83x/I Temp:36.7°C TD:162/83mmhg, 2) Risk of Ineffective Cerebral Perfusion DS: he family said that before the patient was taken to the hospital, he vomited 4 times. The family said the patient experienced decreased consciousness DO: The patient is unconscious. There is a bandage wound on the patient's head. Supporting data HB:8.7 Luekocytes: 9,400 Platelets:222,000 Gds:125 Vital signs BP:162/83mmhg SpO<sub>2</sub>:98% Temp:36.7°C Hours: 83x/i. 3) impaired physical mobility DO: - Total bed rest patient Total dependency value (10) All movements are assisted by a nurse. Vital signs

TD:162/83mmhg GCS: Coma (E1M2V1)  
HR: 77x/I Spo2:98% (Kutip et al., 2024).

The nursing diagnosis obtained was

1. Impaired Spontaneous Ventilation Related to Metabolic Disorders As evidenced by the patient appearing short of breath and using accessory muscles, increased  $P_{cO_2}$  (19.4), decreased  $PO_2$  (191.4), decreased  $SAO_2$  (99.9), installed a ventilator and had a tracheostomy installed.
2. The risk of ineffective cerebral perfusion is proven by the factor of severe head injury.
3. Impaired Physical Mobility related to Neuromuscular Disorders (decreased consciousness) as evidenced by Total dependent patients (10), Total Bedrest patients, with Coma consciousness (E1M2V1).

The implementation of nursing carried out is Identifying respiratory muscle fatigue. Monitor the status of respiration and oxygenation, such as muscle support for breathing, breath sounds. Monitor for airway obstructions, such as accumulation of secretions. Monitor oxygen saturation. Maintain airway patency. Care for your mouth with gauze or lip balm. Perform suction from the tracheostomy according to indications. Identify the cause of increased ICP, such as metabolic disorders. Monitor for increases in Blood Pressure. Monitor for signs/symptoms of increased ICP Monitor MAP Monitor CVP Monitor respiratory status Monitor fluid intake and output. Minimize stimuli by providing a calm environment Adjust the ventilator to keep it optimal. Maintain normal body temperature. Collaborate with the administration of osmosis diuretics.

1. Identify risk factors for falls during loss of consciousness. Identify physical tolerance for movement. Monitor general conditions during mobilization. Facilitate mobilization activities with tools such as bed rails.

Facilitate movement Facilitate wearing clothes Facilitate bathing as needed.

with a nursing evaluation for 3 days during the research. The patient was installed on a ventilator with a tracheostomy. The patient appears short of breath. Breath sounds crackles Consciousness Coma (E1M2V1). Simv mode, Tv 390, RR 12, peep 5, ps 12, fio2 60% with vital signs BP 146/76mmhg, HR: 69x/I, SpO2 100%, Temp 36.9°C. A: The problem of Impaired Spontaneous Ventilation has not been resolved. P: Intervention continues to day 2. O: Patient is installed on a ventilator with Simv Mode, TV 390, RR 12, Peep 5, PS 12, Fio2 50%. Coma Awareness (E1M2V1). Vital Signs BP: 154/74mmHg, HR: 67x/I, SpO2:100% Temp:36.3°C. A: The problem of spontaneous ventilation disorders has not been resolved.P: Intervention continues on day 3. O: Patient is installed on a ventilator with Simv Mode, TV 390, RR 12 x/I Peep 5, ps 12, FiO2 50%, Vital Sign BP: 150/90mmHg, HR: 70x/I, SpO2 100%, Temp 36.7°C A: The problem of spontaneous ventilation disorders has not been resolved P: Intervention Continues.

### Conclusion and Suggestion

Emergency nursing care management plays a crucial role in handling patients with severe head injury. It involves comprehensive and continuous actions including: Accurate assessment, Appropriate nursing diagnoses, Well-planned interventions, Implementation of nursing actions, Systematic evaluation. The use of evidence-based practice and a service excellence approach has been proven to help stabilize the patient's condition, maintain vital functions, and prevent further complications. Effective collaboration among healthcare



professionals—nurses, physicians, and the medical team—as well as proper documentation, is essential for prompt and precise clinical decision-making. In critical cases such as Mrs. H with a coma condition, intensive monitoring, respiratory management using ventilators, and the regulation of cerebral perfusion are crucial actions that must be conducted professionally and according to established standards. With Suggestion For Educational Institutions: Encourage nursing students to engage in clinical practice based on real case studies and evidence-based methods to better prepare for emergency situations in the field. For Nursing Professionals: It is important to continuously enhance competencies in handling critical patients, especially in managing ventilator use, tracheostomy care, and recognizing neurological signs in severe head injury cases. For RSUP H. Adam Malik Hospital: It is recommended to regularly organize training and workshops related to severe head injury management, ventilator application, intracranial pressure handling, and implementation of patient-centered care. For Future Researchers: Further studies should involve a larger number of samples and extended observation periods to provide a broader and more accurate overview of the effectiveness of emergency nursing care. For the Patient's Family: Family members should be educated about the patient's medical condition, the care process, and prognosis, to provide optimal emotional and psychological support throughout hospitalization.

## References

- Davis, L.; & Chen, M. (2024). Secondary Brain Injury No Title prevention: The Role Of Oxygenation And Hemodynamic Management In The Emergency Department. *Journal Of Emergency Nursing*.
- Dinas Kesehatan Kota Medan. (2024). *Profil Kesehatan Kota Medan Tahun 2023-2024*.
- Kementerian Kesehatan Republik Indonesia. (2024). *Hasil Utama Survei Kesehatan Indonesia (Ski) Dalam Angka Provinsi Sumatera Utara*.
- Kementerian Ppn/Bappenas. (2021). *Keputusan Menteri Perencanaan Pembangunan Nasional/Kepala Badan Perencanaan Pembangunan Nasional Nomor Kep.136/M.Ppn/Hk/12/2021 Tentang Penetapan Rencana Aksi Nasional Tujuan Pembangunan Berkelanjutan Tahun 2021-2024*.
- Kutip, Br Samosir, Hastika, Et Al. ". 4. 2024., & Br Samosir, H., Zega, P. D. S., Agussamad, I., Berutu, R. S., Simanullang, R. S. D., & Lestari, D. (2024). Asuhan Keperawatan Pada Tn. I Dengan Acute Myeloid Leukimia (Aml) Di Ruang Rim Rsup H. Adam Malik Medan Tahun 2023. *Prosiding Forum Ilmiah Dan Diskusi Mahasiwa*, 4, 14–17.
- Maas, Andrew I.R.; Menon, D. K. . Et Al. (2022). Traumatic Brain Injury: Progress And Challenges Since The 2017 Lancet Neurology Commission. *The Lancet Neurology*, 21(11), 1004–1060.  
[https://doi.org/10.1016/S1474-4422\(22\)00309-X](https://doi.org/10.1016/S1474-4422(22)00309-X)
- Miller, R. . Et Al. (2024). Oxygen Saturation And Hemodynamic Stability In Traumatic Brain Injury: A Clinical Observational Study. *International Journal Of Emergency Nursing*.
- Nations, U. (2024). *The Sustainable*



*Development Goals Report 2024.*

- Ri, K. K. (2022). *Keputusan Menteri Kesehatan Republik Indonesia Nomor Hk.01.07/Menkes/1159/2022 Tentang Pedoman Nasional Pelayanan Kedokteran Tata Laksana Cedera Otak Traumatik.*
- Samosir, H. B., Dian, P., Zega, S., Agussamad, I., Kp, S., Kes, M., Syahputra Berutu, R., Sartika, R., Simanullang, D., & Lestari, D. (2023). Asuhan Keperawatan Pada Tn. I Dengan Acute Myeloid Leukemia (Aml) Di Ruangan Rim Rsup H. Adam Malik Medan Tahun 2023. *Forisma*, 4, 6–9.
- Simanjuntak, R.; & Sinaga, S. N. (2022). Karakteristik Pasien Cedera Kepala Akibat Kecelakaan Lalu Lintas Di Rsud Dr. Pirngadi Medan. *Jurnal Ilmiah Pannmed (Pharmacist, Analyst, Nurse, Nutrition, Midwivery, Environment, Dentist).*
- Thompson, R.; & Williams, J. (2022). Clinical Management Of Traumatic Brain Injury: Update On Gcs And Neurological Assessment. *The Lancet Neurology.*
- Wicaksono, A. S. . Et Al. (2021). Epidemiology Of Traumatic Brain Injury In Indonesia: A Systematic Review Of National Health Research Data. *Indonesian Journal Of Neurosurgery.*
- World Health Organization. (2023). *Global Status Report On Road Safety 2023.*