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# Primary survey emergency with optimization of cerebral tissue perfusion in hypertension patients in emergency installation

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#### **Abstract**

Hypertension is a disease of the cardiovascular system caused by an unhealthy lifestyle that can cause an increase in blood pressure above normal, a decrease in oxygen levels in the brain with saturation < 95%, and the occurrence of ineffective Cerebral Perfusion with signs of increased intracranial pressure such as headaches, and nausea and vomiting. Emergency treatment in patients with nasal cannula oxygen to reduce shortness of breath, increase oxygen saturation > 95% and reduce signs of increased intracranial pressure. Using a descriptive case study with a nursing care process consisting of independent action by monitoring oxygen saturation and providing a semi-Fowler position and collaborative action by giving nasal oxygen cannula 4 liters/minute. The patient's shortness of breath has been reduced with oxygen saturation increasing by 98%, breathing rhythm is regular with a frequency of 20x/minute, and signs of increased intracranial pressure are reduced. Caring attitude and empathy towards patients, which are necessary for emergency nursing care to overcome and manage hypertension emergencies, can be overcome.

**Keywords:** hypertension, emergency, cerebral perfusion, oxygen, caring

#### Introduction

In serving emergency patients, the Integrated Emergency Management System (IEMS) is a system that coordinates the multi-sectoral and is supported by various multi-disciplines and multi-specialties. IEMS services are divided into three subsystems: pre-hospital, intra-hospital, and inter-hospital. IEMS is fast, attentive, and precise like service, helps life, prevents disability, or is known as "saving time is saving lives and limbs" [1].

Emergency care is a type of care given to patients in an emergency that requires immediate action for the safety of the patient's life [2]. Urgent clinical conditions must be taken immediately to save the patient's life and prevent disability [1]. Emergency medical care requires services from public and private health facilities to save patients' lives and prevent disability and death. Government and private health facilities are prohibited from rejecting patients [3]. In this case, it shows that the government's protection of patient safety and emergency practice aims to save patient lives. The priority in emergency nursing is how to save lives, prevent damage before taking any action, and then heal the patient in the best condition. "Time-saving is life and limb saving" with solid teamwork between health workers [4]. The principle in emergency nursing is fast, accurate, and precise actions from a nurse, both personally and as a teamwork that is able to produce evaluations in minutes or seconds. A good response time and following the standards of emergency nursing services from health workers can provide security and comfort and reduce finances for patients and families in the treatment process because it will impact the patient's next period of care [5].

The Emergency Room is a service unit that provides initial action for patients suffering from potentially life-threatening illnesses or injuries <sup>[6]</sup>. The function of the emergency room is to receive and stabilize patients who need immediate treatment, both in everyday situations and in disasters <sup>[7]</sup>.

Emergency services are the vanguard for patients experiencing emergencies [8].

In providing nursing care, nurses must be able to provide professional and competent actions in emergencies. Nursing care has five components, namely nursing assessment, nursing diagnosis, nursing intervention, nursing implementation, and nursing evaluation <sup>[9]</sup>. In carrying out the primary assessment, nurses must take swift action in assessing patients with threatening conditions. A review of primary survey data shows the patient's condition, including until the patient's condition improves. In reviewing the secondary survey, the nurse conducts a thorough physical examination from head to toe (head to toe) <sup>[10]</sup>.

Hypertension is a condition in which blood pressure is above normal, which can lead to increased health problems. High blood pressure occurs without complaints and can be called a silent killer. Because of this, she did not know that she had high blood pressure, which happened only after complications <sup>[11]</sup>. Blood pressure refers to very high blood pressure in the heart's veins, which enters the bloodstream to all tissues and organs of the body <sup>[12]</sup>. Clinical manifestations in hypertensive patients are headaches, nausea, and vomiting due to increased blood pressure and blurred vision.

Emergency nurses have roles and functions following the conditions of emergency services, namely: the first function is independence; namely, the nurse has a role as a nurse. The second function is the dependent function, in which the nurse is instructed by other health workers when carrying out therapeutic actions. The third function is the collaboration feature, where nurses collaborate in health programs [13]. Emergencies are often unexpected and can happen anywhere. The scope of the emergency department can be divided into three categories: pre-hospital, in-patient, and post-hospital. The basis of the primary survey examination is ABCD, namely Airway (airway), Breathing (breathing), Circulation (circulation), and Disability

(neurological conditions). Meanwhile, the secondary survey conducted an overall physical examination [14].

The prevalence of hypertension in the world is 22% of the world population. In 2025 there will be an increase in hypertension by 1.5 billion people, and it is estimated that every year 10.44 million people will die from hypertension and complications <sup>[15]</sup>. The African region has the highest prevalence of hypertension at 27%. Southeast Asia has the 3rd highest prevalence, with 25% of the population <sup>[16]</sup>.

It is estimated that the number of cases of hypertension in Indonesia is 63,309,620, and the death rate due to hypertension in Indonesia is 427,218 [17]. Hypertension is the cause of death for 23.7% of 1.7 million deaths in Indonesia. High blood pressure is a major risk factor for heart disease, kidney failure, diabetes, and stroke, making it a major problem in Indonesia and worldwide [18].

The prevalence of patients aged 18 years based on blood pressure measurements was 34.1%, South Kalimantan (44.1%) had the highest prevalence, and Papua (22.2%) had the lowest prevalence. At the age of 18-24 years, 8,356,869 people had hypertension from 13.2%; at the age of 25-44 years, there were 32,731,073 people from a percentage of 51.7%; aged 45-54 years, there were 28,679,257 million people from 45.3%, aged 55-64 years recorded as many as 34,946,910 million people from 55.2%, aged 65-74 years recorded as many as 40,011,679 million people from 63.2%, and aged 75 years and over have the highest hypertension rate compared to those aged 75 and under, namely 44,000,185 million people. In DKI Jakarta, 27,195 people have been recorded as having hypertension. DKI Jakarta ranks ninth with a prevalence rate of 33.43% [1].

Hypertension is a disease that requires home care by controlling blood pressure independently and taking hypertension medication regularly to stabilize blood pressure values in the body. High blood pressure can cause complications such as cardiovascular disease, stroke, and retinopathy if not treated properly [19]. Hypertension occurs due to inefficient human lifestyles, such as smoking, drinking alcohol, and not doing physical activity, which can lead to obesity [20]. Stressors can also cause high blood pressure because the activity of the sympathetic nervous system can cause an unstable increase in blood pressure. [21] Hypertension continues to occur, which negatively impacts the body, such as damage to organs, headaches, or pain in the neck, which can cause blurred vision and fainting [22]. Pharmacological management should be carried out with standard drugs such as diuretics, sympathetic or sympathetic blockers, arteriovascular dilators, angiotensin antagonists or so-called ace inhibitors, calcium channel blockers, or calcium channel blockers [23]. Non-pharmacological management includes a low-salt diet, reducing body weight, not consuming cigarettes, avoiding coffee and alcohol, avoiding fatty foods, and doing regular exercise and physical activity [24]. The results of research in the management of hypertensive patients in the emergency room with acute pain nursing problems by showing the success of giving anti-hypertension with the results of blood pressure values returning to normal in the range of 120 mmHg diastolic and 90 mmHg systolic [1].

The triage process is carried out in hypertensive patients by assessing whether the patient has mild, moderate, or severe symptoms. The triage process is carried out with a primary survey or initial assessment by assessing whether there are problems with the airway consisting of airway obstruction

or obstruction in the airway and additional breath sounds. While breathing, look at chest movements, breathing rhythms, and regular breathing patterns, or not. While circulation, see if the patient has a lack of fluids. Patients are in red triage or priority one (P-1) if they experience airway, breathing, and circulation disorders [1]. In cases of hypertension, there are serious problems in breathing and circulation with a nursing diagnosis found in the emergency room, namely Ineffective Cerebral Perfusion related to Hypertension [25]. Nursing actions for hypertension in the emergency room include providing oxygen therapy, and administering measuring vital signs, intravenously.

Emergency hypertension can attack chronic hypertension patients, and if not controlled for a long time, high blood pressure will cause very dangerous symptoms, namely organ damage. Suppose the diastolic blood pressure can be maintained above 130 mm Hg. In that case, emergency hypertension results in end-organ damage, a series of physiological decompensations that begin hypertensive crisis level and will develop systemically in the vascular network. Sexual and localization can lead to increased vascular reactivity [26]. According to Jean Watson's theory, the "Human Science and Human Care" approach in nursing focuses on treating patients humanistically and combined with basic science. Nurses in the ER are not only required to be able and alert in helping patients quickly and accurately or are trained but must be able to provide nursing care by providing care directly to patients or indirectly to the patient's family to provide health education. The caregiver in this study directs the writer in providing nursing care by caring for and supporting recovery and preventing the occurrence of disabilities and psychological disorders in patients. Before applying the caregiver principle, the emergency nurse must approach the patient and the patient's family to ensure that the medical history received is accurate and current [27].

The application of Christian values applied at the Christian of University Indonesia, which consists humility/humility, sharing and caring, discipline/discipline, professional/professional, responsibility/responsible, and integrity/having integrity, is very important for nurses in providing nursing care to patients. The implementation of UKI values in this research is having humility will make patients feel happy, then an attitude of sharing and caring can create a sense of empathy for patients in the process of emergency nursing care, discipline can make the results of the implementation of nursing care following As expected, a professional attitude can lead to a feeling of satisfaction in patients, and a responsible attitude can build mutual trust between nurses and patients. An attitude of integrity is very important in the consistency of patient actions. Applying nursing care services also requires a caring attitude to patients. Based on the results of research [28] show that a caring attitude can have a positive impact by increasing selfconfidence for nurses and can create a safe and comfortable atmosphere, reduce stress, fear, and anxiety to create a calmer, more focused, more enthusiastic atmosphere when providing care to patients. The caring attitude given by the author in the process of emergency nursing care can create healing and well-being for patients.

Based on the author's experience in the emergency room, the phenomenon in the case of hypertension is that patients complain of headaches, nausea, and vomiting due to increased intracranial pressure. In this case, it is caused by the patient's non-compliance with dietary restrictions. The author is interested in providing emergency nursing care and educating patients and related families about hypertension to create healing and full health. In the bible, 2 Chronicles 15 verse 7 says, "But you, strengthen your heart, do not be weak in spirit, for there is a reward for your efforts." This verse shows to have a firm spirit, not to give up easily and give up in pursuing a goal. A nurse who treats patients enthusiastically and joyfully can heal sick patients. Every effort and struggle will produce very satisfying results; as the saying goes, an effort will never betray results. Thus the author is motivated by the bible verse 2 Chronicles 15:7 in compiling this final scientific paper.

Based on the background above, the authors would like to provide an overview of the management in a case study entitled "Emergency Breathing Circulation Disability with Optimization of Cerebral Perfusion in Hypertension Patients in the IGD RS TK II MOH. RIDWAN MEURAKSA" Based on the background above, the authors formulated the problem in this study as a question, namely, "How is the Emergency Management of Breathing Circulation Disability With Optimization of Cerebral Tissue Perfusion in Hypertension Patients in the IGD RS TK II Moh Ridwan Meuraksa?" The research aims to gain real experience by observing the emergency management of Breathing Circulation Disability by optimizing Cerebral Tissue Perfusion in Hypertension Patients in the IGD TK II Moh Ridwan Meuraksa Hospital.

#### Research method

This scientific paper is a research with a case study approach to describe the emergency management of hypertensive patients. The design of this case study uses descriptive research by explaining current events analytically and prioritizing actual data rather than conclusions. Scientific writing using the descriptive research case study method is a research method whose main objective is to describe the situation objectively by studying the problem through case studies [29]. The author obtains sources from quantitative journals through electronic journals from internet sites. In collecting material obtained

from research sources and sorting according to written studies, namely Emergency Management of Breathing Circulation Circulation with Optimization of Cerebral Tissue Perfusion in Hypertension Patients at the Emergency Room of TK II Moh Ridwan Hospital Meuraksa Jakarta. The source of the study is obtained through the latest data on issues that have occurred recently. In this case, the author will obtain research materials following the circumstances and conditions the world community faces today. This paper uses two people as subjects which will be carried out by observation as a whole. This scientific paper focuses on the emergency management of hypertensive patients through observation, physical examination, and interviews with patients in actions carried out by the author with nurses and doctors in the emergency room of TK Hospital. II Moh. Ridwan Meuraksa Jakarta. In this case study research, researchers used Level 2 PPE instruments (gloves, surgical masks, gowns, eye protection, and head coverings), emergency department assessment formats, and tools to measure vital signs (stethoscopes, tensimeters, watches, thermometers, and documentation sheet of data analysis techniques. Data analysis is a descriptive analysis using data to describe and summarize data scientifically in tables or graphs. Data analysis and presentation of data in case studies are displayed in the text, along with the facts used in the story's text. Interpreting data analysis is an important part of concluding with actual results.

#### Result and discussion

The results of case studies in collecting study material were obtained through observation, physical examination, direct interviews with patients and their families, as well as medical and nursing records. This chapter will discuss following the theoretical review in CHAPTER II concerning nursing care for hypertensive patients through the stages of the nursing care process, namely assessment, nursing diagnosis, nursing planning, and nursing evaluation according to the primary survey and secondary survey.

The assessment was carried out on patients 1 and 2, starting from the patient's identity consisting of name, gender, age, religion, marital status, education, occupation, source of information, and address of residence in patients 1 and 2.

Table 1: Identity of patients 1 and 2

Patient identity	Patient 1	Patient 2
Medical Record Number	446384	445897
Medical diagnosis	Hipertensi Emergency	Hipertensi Emergency
Name	Mr. W	Mr. S
Gender	Male	Male
Age	40 years	43 years
Religion	Islam	Islam
Marital status	Married	Married
Education	Senior High School	Vocational High School
Occupation	Private Labor	Private employees
Triage	Priority 2	Priority 2
Main complaint	Headache	Weak
	On April 28, 2022, at 10:45 WIB, the patient	The patient came to the TK Hospital Emergency
	came to the TK Hospital Emergency Room.	Room on May 13, 2021, at 10:00 WIB. II Moh. His
Chronology of Complaints		family brought Ridwan Meuraksa in a fainting state,
Chronology of Complaints	by his family, complaining of headaches	he looked weak, accompanied by headaches on a
	since 3 SMRS with a scale of 6, headaches	scale of 5, dizziness, nausea, vomiting 3x with a
		total of $\pm 400$ cc since this morning, and his right and
	speech, and shortness of breath	left hands seemed stiff, and difficult to move.
Orientation	tingling fingers, slurred speech, and shortness	
Offentation	of breath	and difficult to move.
Past Medical History	Good, knows the place and time, and knows	Good, knows the place and time, and knows people
1 day Wedlear History	people well Hypertension	well Uncontrolled hypertension

According to Ida Mardalena, Triage is a patient selection process in classifying the level of emergency. In triage, there are four priority classifications, namely Emergency (Priority 1), Non-Emergency (Priority 2), Not Emergency Non-Emergency (Priority 3), and Dead On Arrival (Priority 4). Triage for patients 1 and 2 is Non-Emergency (Priority 2). [30]

In the primary survey, a rapid and systematic assessment is carried out at the initial arrival of the patient; this aims to identify the patient's emergency condition and the risks or potential problems in the patient that can threaten the patient's life. While the secondary survey, carried out systematically when the patient's airway-respiratory-circulation condition is stable, aims to identify the patient's condition in more detail, focuses a lot on the patient's medical history, vital signs, and a complete physical examination "head to toe" from the top of the head to the end of the lower extremities [31].

Table 2: Assessment of the primary survey and secondary survey of patients 1 and 2

Primary Survey Assessment	Patient 1	Patient 2	
	The patient's airway is patent; there is no airway	The patient's airway is patent; there is no airway	
	obstruction such as gurgling and snoring, vesicular		
Airway	breath sounds, and no additional breath sounds	breath sounds such as wheezing, rhonchi, snoring,	
		or gurgling. In patient 2, it can be concluded that the	
	be concluded that the airway is clear.	airway is clear.  Symmetrical chest movements with irregular	
	Symmetrical chest movements, irregular breathing	breathing patterns, then chest muscle retraction and	
<b>5</b> 41	patterns, then there is chest muscle retraction and	experiencing shortness of breath with a respiratory	
Breathing	experiencing shortness of breath with a respiratory	rate of 23x/m, 90% saturation, breathing feels	
	rate of 22x/m, 92% saturation. In patient 1, it can be concluded that breathing is not clear.	difficult. In patient 2, it can be concluded that	
	be concluded that breathing is not crear.	breathing is not clear.	
		The patient's pulse was palpable; there were no	
	The patient's pulse was palpable; there were no signs of cyanosis, CRT <2 seconds, no bleeding,	signs of cyanosis, CRT < 2 seconds, no bleeding, and pulse rate 107x/minute; there was an additional	
Circulation	and pulse rate 92x/minute. In patient 1, it can be	complaint that the patient had vomited ± 400cc	
	concluded that the circulation is clear.	since morning, 3.2 mmol/L. In patient 2, it can be	
		concluded that the circulation is unclear.	
	The patient's response was alert, the level of	Responses to the patient's verbal, apathetic level of	
	consciousness was composmentis, pupillary	consciousness, pupillary reaction isochoric, light	
5	reaction isochoric, light reflexes +/+, BP 201/121	reflex +/+, BP 176/113 mmHg, the patient was	
Disability	mmHg; there were additional complaints, namely	unconscious when brought to the emergency room,	
	nausea, headache with a scale of 6, fingers tingling, and slurred speech. In patient 1, it can be	and pain in the back of the head with a scale of 5, stiff hands difficult to move. In patient 2, it can be	
	concluded that the disability is unclear.	concluded that the disability is unclear.	
	There were no deformities, contusions, signs of	There were no deformities, contusions, signs of	
	abrasion, penetration, lacerations, and edema in	abrasion, penetration, lacerations, and edema in the	
Exposure	the patient; the patient's temperature was 36.6°C,	patient; the patient's temperature was 36.4°C, and	
	and there were no additional complaints. In patient		
	1, it can be concluded that the exposure is clear.	can be concluded that the exposure is clear.	
	Secondary Survey Assessment A secondary survey assessment was carried out	A secondary survey assessment was carried out with	
Current medical history	with anamnesis; the results were: Severe headache		
	with a scale of 6	of 5	
		There was no history of food and drug	
Allergy	There was no history of food and drug allergies	Allergies	
Medication	Amlodipine 10 mg	Amlodipine 10 mg	
Past medical history	Controlled Hypertension	Uncontrolled Hypertension	
Last Meal and Drink	Chicken porridge at 07:00 WIB	Hot sweet tea at 08:30 WIB	
	1 0		
C F	It occurs suddenly when the patient just got home	It happened suddenly when the patient returned	
Cause Event	from work, TB 168 cm, BB 65 kg, Body Mass	from the market with a neighbor, TB 172 cm,	
	Index (BMI) 23.04. In patient 1, it can be	weight of 70 kg, and body mass index (BMI) of	
	concluded that the secondary survey is clear.	23.72. In patient 1, it can be concluded that the	
Secondary survey is clear  Head to Toe			
		Inspection: The head shape is symmetrical, the scalp	
Handar I I	inspection: Symmetrical nead snape, clean scalp,	is clean, there are no wounds, no tumors, and there	
Head and neck	no wounds, no tumors, thick hair	is a hit of area hair	
	Palpation: There is no lump on the head, and there is no jugular vein distension in the neck	Palpation: There is no lump on the head, and there	
	· ·	is no jugular vein distension in the neck	
	Inspection: Symmetrical chest movement, no	Inspection: Symmetrical chest movement, no	
Chest	injuries Palpation: No tenderness, vocal premitus palpable	injuries Palpation: No tenderness, vocal permits palpable	
	equally in both lungs	equally in both lungs.	
	equality in both fullgs	equally in both fungs.	

	Percussion: Resonant percussion sound Auscultation: No additional breath sounds, vesicular breath sounds	Percussion: Resonant percussion sound Auscultation: No additional breath sounds, vesicular breath sounds
Abdomen	Inspection: Abdominal shape is symmetrical; there are no wounds Palpation: No abdominal tenderness, no ascites, no bloating Percussion: Abdominal tympanic sound percussion Auscultation: Bowel sounds 13x/minute	are no wounds
Pelvis	Inspection: No cyanosis, no swelling Palpation: No pelvic pain	Inspection: No cyanosis, no swelling  Palpation: No pelvic pain
Upper and lower extremities	Inspection: No rash on the skin, no abnormalities in the upper and lower extremities Palpation: The skin turgor is elastic, the left and right hands can still move actively and can resist the pressure given, but the fingers are tingling, and the left and right feet have no abnormalities	Inspection: No rash on the skin, no abnormalities in the upper and lower extremities Palpation: Skin turgor is not elastic, right and left hands are stiff and difficult to move, left and right legs have no abnormalities
Back	Inspection: The shape of the back is symmetrical Palpation: There is no abnormality on the back, no tenderness	Inspection: The shape of the back is symmetrical Palpation: There is no abnormality on the back, no tenderness
Neurological	There were no problems on examination of the 12 cranial nerves	No abnormalities were found, and 12 cranial nerves were functioning properly

Diagnostic tests performed on hypertensive patients include an Electrocardiogram, which consists of examinations: left ventricular hypertrophy, myocardial ischemia or infarction, P wave elevation, and conduction disturbances. X-ray: enlarged heart shape and rib size in aortic stenosis, obstruction, pulmonary presentation, renal parenchymal hyperplasia, and renal neovascularization [32]. A nursing diagnosis is an actual response to a health problem that a

licensed nurse can handle. Actual and potential responses were obtained from the data evaluation results, the client's past medical records, and consultations with other professionals to diagnose the disease the patient experienced [33]. In nursing interventions, goals and actions are to be achieved (how, when, and who is involved in nursing behavior) when developing a nursing behavior plan to address patient health problems [34].

**Table 3:** Nursing interventions

	Nursing diagnoses	Results Criteria	Intervention	Rational
Patients 1 and 2	Breathing Ineffective Breathing Patterns	After the nursing action is carried out, it is hoped that the Ineffective Breathing Pattern can be resolved with the following criteria:  1. Decreased dyspnea  2. Breathing rate improves (16-20x/minute)  3. Depth of breath improves	1. Monitor rate, rhythm, depth, and respiratory effort 2. Monitor breathing patterns (e.g., bradypnea, tachypnea) 3. Monitor O2 saturation and pulse rate using oximetry 4. Collaboration in administering nasal cannula oxygen 4 liters/minute	Know the frequency, rhythm, depth, and effort of breathing
Patient 2	Circulation Hypovolaemia	After the nursing action is carried out, it is hoped that the hypovolemia in the patient will be resolved with the following criteria:  1. The feeling of weakness decreases  2. Pulse rate improves (60-100x/minute)  3. Pulse pressure improves  4. Fluid intake improve  5. skin turgor improves  6. Mucous membranes improve	<ol> <li>Check for signs and symptoms of Hypovolemia (e.g., increased pulse)</li> <li>Monitor fluid intake and output</li> <li>Give oral fluid intake</li> <li>Collaborative IV isotonic administration (e.g., Nacl, RL)</li> </ol>	<ol> <li>Recognize the early signs and symptoms of hypovolemia</li> <li>Determine the patient's fluid intake status</li> <li>Meet the patient's fluid loss needs</li> <li>Meet the fluid needs of the patient</li> </ol>
Patients 1 and 2	Disabilities Ineffective Cerebral Perfusion	After the nursing action is carried out, it is expected that Ineffective Cerebral Perfusion in patients will be resolved with the following criteria:  1. The level of consciousness increases	<ol> <li>Identify causes of increased ICP</li> <li>Monitor for signs and symptoms of increased ICP</li> <li>Give it a semi-Fowler's position</li> </ol>	Know the causes of the increase in ICT     Know the signs and symptoms of increased ICP in patients     Creating a sense of security and comfort

2.	Increased intracranial pressure decreased	4. Collaborative administration of	in patients 4. Meet the fluid needs
3.	Decreased headache (0-1	osmotic diuretics, if	of the patient
	scale)	necessary	
4.	Anxiety decreases		
5.	Systolic blood pressure		
	improves (90 mmHg)		
6.	Improved diastolic blood		
	pressure (120 mmHg)		

Implementation is the step in implementing a treatment plan to help patients achieve goals <sup>[35]</sup>.

**Table 4:** Implementation of nursing in patients 1 and 2

	Nursing Implementation in Patients 1 and 2				
Time	Patient 1	Time	Patient 2		
10:45	Accepting new patients and identifying patient identities Results: Initials Mr. W, 40 years old, male, private laborer, last high school education, marital status is married	10:00	Accept new patients and monitor O2 saturation using pulse oximetry Results: Initials Mr. S, 43 years old, 90% O2 saturation (not yet using oxygen)		
10:50	Identify patient complaints Results:  The patient said headache with a scale of 6; the head felt dizzy like spinning, nausea, tingling fingers, slurred speech, and shortness of breath, and O2 saturation of 92%	10:05	Administer nasal cannula oxygen at 4 liters/minute Results: Oxygen has been installed, and the patient looks comfortable		
10:55	Review TTV Results: BP 201/121 mmHg, pulse 92x/minute, temperature 36.6°C, respiratory rate 22x/minute	10:08	Identify patient complaints Results: The patient experienced a decrease in consciousness or fainted at home, and then the family took him to the emergency room; he had a headache on a scale of 5, dizziness, nausea, vomiting 3x with a total of ± 400cc since morning, and stiffness hands difficult to move, SPO2 90%		
11:00	Monitor pulse rate and O2 saturation using pulse oximetry Results: Oxygen saturation 92% (not using oxygen), with a pulse rate of 92x/minute	10:10	Review TTV Results: BP 176/113 mmHg, pulse rate 107x/minute, temperature 36.4°C, respiratory rate 23x/minute		
11:00	Assess the general condition of the patient Results: The general condition looked moderately ill, with composmentis consciousness	10:15	Place the patient in a semi-Fowler's or Fowler's position Results: The patient looks comfortable and relaxed in the given semi-Fowler's position Assess the general condition of the patient Results: The general condition looks moderately ill; the consciousness is apathetic		
11:03	Place the patient in a semi-Fowler's or Fowler's position Results: The patient looks comfortable and relaxed in the given semi-Fowler's position	10:15	Assess the general condition of the patient Results: The general condition looks moderately ill; the consciousness is apathetic		
11:05	Administer nasal cannula oxygen at 4 liters/minute Results: Oxygen has been installed, and the patient looks comfortable	10:17	Observing saturation and respiratory rate after administration of nasal cannula oxygen 4 liters per minute Results:  O2 saturation 95%, respiratory rate 22x/minute		
11:08	Observing saturation and respiratory rate after administration of nasal cannula oxygen 4 liters per minute Results: O2 saturation 95%, respiratory rate 21x/minute	10:15	Provide education to patients and families regarding the purpose and procedure of ECG Results: Patients and families understand and agree to do the ECG procedure		
11:10	Identify signs and symptoms of increased ICP Results: The patient complains of headaches with a scale of 6	10:20	Perform ECG recording Results: The patient's ECG result is Normal Sinus Rhythm		
11:12	Provide education to patients and families regarding infusion procedures and provide informed consent Results:  The family agreed to do the infusion and signed an informed consent	10:21	Identify signs and symptoms of increased ICP  Results: The patient complained of headache with a scale of 5 accompanied by nausea		
11:13	Take a sample of venous blood for laboratory examination	10:22	Provide education to patients and families regarding		

	Results:  Laboratory results have been received and examined by a doctor		infusion procedures and provide informed consent Results: The family agreed to do the infusion and signed an
11:20	Performing the installation of intravenous fluids with RL 500 cc Results: The infusion was installed in the left hand, 20 drops/minute, with no signs of phlebitis	10:25	informed consent  Take a sample of venous blood for laboratory examination Results:  Laboratory results have been received and examined by a doctor
11:33	Provide education to patients and families regarding the purpose and procedure of ECG Results: Patients and families understand and agree to do the ECG procedure	10:58	Installing intravenous fluids with RL 500 cc Results: The infusion was installed in the left hand, 20 drops/minute, with no signs of phlebitis
11:35	Perform ECG recording Results: The patient's ECG result is Normal Sinus Rhythm	11:00	Advise the family to give the patient to drink orally Results:  The family understands and gives the patient 300cc warm sweet tea
12:00	Give Amlodipine 10 mg Results: Medication has been given, no signs of nausea and vomiting	11:10	Give Amlodipine 10 mg and domperidone 10 mg Results: The drug has been given; the patient is still vomiting $\pm$ 150 cc
12:05	Take the patient to do a Thorax X-ray to radiology Results: The results have been received and examined by a doctor	11:13	Advise the family to take care of patient administration regarding the antigen swab action Results:  The family has taken care of administration; the patient files are complete
12:45	Advise the family to take care of patient administration regarding the antigen swab action Results: The family has taken care of administration; the patient files are complete	12:00	Take the patient to do an antigen swab Results: Negative antigen swab results
13:00	Take the patient to do an antigen swab Results: Negative antigen swab results	12:30	Observing TTV before the patient is transferred to the inpatient room Results: BP 142/86 mmHg, pulse rate 90x/minute, S 36.5°C, respiratory rate 20x/minute, SPO2 97%
13:30	Observing TTV before the patient is transferred to the inpatient room Results:  BP 130/95 mmHg, pulse 90x/minute, temperature 36.5°C, respiratory rate 18x/minute, SPO2 98%	12:50	Escort the patient to enter the Lavender inpatient room Results:
15:00	Escort the patient to enter the Lavender inpatient room Results: The patient has been escorted, and the room nurse performs the operation		The patient has been escorted, and the room nurse performs the operation

Nursing evaluation is the final stage of the nursing process, which is a systematic and planned comparison between the observed results and the goals and outcome criteria set in the plan. [36]

**Table 5:** Nursing evaluation of patients 1 and 2

Nursing Evaluation	Patient 1	Patient 2
Breathing Ineffective Breathing Patterns	S: The patient says the tightness has decreased O: The general condition looks moderately ill, Consciousness Composmentis, BP 130/95 mmHg, pulse rate 90x/minute, temperature 36.5°C, respiratory rate 18x/minute, SPO2 98% A: The Ineffective Breathing Pattern problem is resolved P: Interventions 3 and 4 are continued in the Lavender treatment room	S: The patient says the tightness has decreased O: The general condition looks moderately ill; Consciousness Composmentis, BP 142/86 mmHg, pulse rate 96x/minute, temperature 36.5°C, respiratory rate 20x/minute, SPO2 97% A: The Ineffective Breathing Pattern problem is resolved P: Interventions 3 and 4 were continued in the Lavender treatment room
Circulation Hypovolaemia	Clear	S: The patient's family said that vomiting decreased by ± 150 ccs, and they consumed 300 ccs of hot sweet tea O: Composmentis consciousness, BP 142/86 mmHg, pulse 96x/minute, temperature 36.5°C, respiratory rate 20x/minute, SPO2 97%, decreased feeling of weakness, improved mucous membranes, elastic skin turgor A: The circulation problem is partially resolved P: Interventions 2, 3, and 4 are continued in the Lavender treatment room
Disability	S: The patient says the head still feels dizzy, and the	S: The patient says the head still feels dizzy, and the pain
Ineffective Cerebral	pain scale of 2	scale of 4

Perfusion	O: BP 130/95 mmHg, pulse 90x/minute, temperature	O: BP 142/86 mmHg, pulse 96x/minute, temperature
	36.5°C, respiratory rate 18x/minute, SPO2 98%,	36.5°C, respiratory rate 20x/minute, SPO2 97%, Increased
	decreased intracranial pressure, decreased anxiety	level of consciousness, decreased intracranial pressure,
	A: Ineffective Cerebral Perfusion Problem	decreased anxiety
	P: Interventions 3 and 4 are continued in the Lavender	A: The problem of Ineffective Cerebral Perfusion is
	treatment room	partially resolved
		P: Interventions 3 and 4 are continued in the Lavender
		treatment room
<u> </u>	·	

In the assessment process, the authors were accompanied by emergency room nurses using the emergency care assessment format using data collection methods through interviews, observation, and physical examination of both patients in the emergency room at TK II Moh Hospital. Ridwan Meuraksa Jakarta. The results of patient identity data were obtained by patient 1 with the initials Mr. W, Male sex, 40 years old, works as a private worker, marital status is married, medical diagnosis of Hypertension Emergency. Patient 1 data collection was collected on April 28, 2022, at 11:30 WIB. Data on patient 2 with the initials Mr. S, male sex, 43 years old, works as a private employee, marital status is married, medical diagnosis of Hypertension Emergency. Data collection was carried out on May 13, 2022, at 11:00 WIB. The author obtained that there was a 3year age difference between patient 1 and patient 2, with the male gender being the same. Patient 1 had a history of controlled hypertension, while Patient 2 had uncontrolled hypertension.

The results of the data on the identity assessment of the author's patient did not experience any inhibiting factors because patients 1 and 2 were very cooperative in answering the questions asked, making it easier for the writer and nurses to identify the patient's identity. In patients 1 and 2, a medical history of hypertension was found.

In determining triage, the author does this by looking at the level of emergency. So that the results obtained in patients 1 and 2 are in non-emergency triage or priority two yellow. Non-emergency or priority two conditions are lifethreatening but do not require emergency action. The author started from the airway with the results of the two patients having no airway obstruction such as gurgling, snoring, and no additional breath sounds such as rhonchi and wheezing in carrying out the primary survey assessment in patients 1 and 2. The authors obtained similarities in patients 1 and 2, so it can be concluded that the airway is clear [30].

In the second stage, the authors conducted a breathing assessment in patient 1, resulting in shortness of breath with symmetrical chest movement, irregular breathing rhythm with a frequency of 22x/minute, and no chest muscle retraction with 92% oxygen saturation. Meanwhile, patient 2 experienced shortness of breath with symmetrical chest movements, irregular breathing rhythm with a frequency of 23x/minute, and 90% oxygen saturation. In patients 1 and 2, the authors concluded that breathing was unclear. Assessment of circulation in both patients was a palpable pulse, with no signs of bleeding and cyanosis; patient 1's pulse rate was 92x/minute, while patient 2's was 107x/minute. Patient 1 had no additional complaints, while patient 2 had vomited ± 400cc since the morning before being taken to the emergency room. In patient 2, the authors concluded that the circulation was not clear.

Assessment of disability in patient 1 with an alert response and compos mentis level of consciousness, while patient 2 experienced fainting with verbal responses and apathetic level of consciousness. Both patients had the same complaint, namely headache; in patient 1, pain scale 6 with a BP of 201/121 mmHg, and in patient 2, pain scale 5 with a BP of 176/113 mmHg. There are additional complaints, such as patient 1 experiencing nausea, tingling fingers, and slurred speech. Whereas patient 2 experienced stiff hands that were difficult to move. In both patients, the authors drew conclusions about disability that were not clear. The authors found that patients 1 and 2 had similarities in the exposure assessment. Namely, the patients had no deformities, contusions, or signs of abrasion, penetration, lacerations, or edema. Patient 1's temperature is 36.6°C, while Patient 2's is 36.4°C, and there are no other complaints. So that, in both patients, the authors can conclude the exposure is clear. The secondary survey assessment in patients 1 and 2 found no complaints other than headaches, so the authors concluded that the second survey was clear. The factors that support the authors in conducting assessments on patients 1 and 2 are the results of interviews accompanied by an emergency room nurse.

In the secondary survey assessment, the authors obtained results in patients 1 and 2 that there were no abnormalities in the head such as lacerations, lumps, and no distension of the jugular veins in the neck in the chest area, the results of patient 1 were symmetrical chest movements, irregular breathing rhythm with a frequency of 22x/ minutes. There is a retraction of the chest muscles with a saturation of 92%, whereas in patient 2, the pattern of breathing is irregular with a frequency of 23x/minute, and the patient is in a fainting position with a saturation of 90%. In the abdomen of the two patients, there were no abnormalities such as tenderness; in the pelvis, there were no abnormalities such as fractures in patients 1 and 2. Subsequent assessment of the upper and lower extremities in patient 1 experienced fingers-like tingling, while in patient 2, the right and left hands seemed stiff and difficult to move; there were no abnormalities on the back and no problems on examination of the 12 cranial nerves of patients 1 and 2.

In the author's diagnostic examinations on patient 1, they blood samples for routine blood electrocardiograms, and antigen swabs. Patient 2's blood samples were taken for routine blood tests, ABG and electrolytes, and electrocardiogram. In the diagnostic examination, the authors obtained similarities, namely the electrocardiogram, so that the authors can conclude that there is no gap between theory and cases. The author concludes the diagnostic examination of patients 1 and 2, with the first stage being routine blood tests and AGD and electrolytes until the results have been released. The second stage is carried out with an EKG examination.

A nursing diagnosis is an actual response to a health problem that a licensed nurse can handle. Actual and potential responses are obtained from the data evaluation results, the client's past medical records, and consultations with other professionals to diagnose the patient's disease. [33] The nursing diagnosis of breathing is an Ineffective

Breathing Pattern which is inspiration and expiration that does not provide adequate ventilation (D.0005). In patients 1 and 2, the diagnosis of the Ineffective Breathing Pattern was obtained, and the authors found no difference between theory and cases on breathing examination. The nursing diagnosis for circulation is hypovolemia, an increase in intravascular, interstitial, or intracellular fluid volume (D.0023). Patient 2 received a diagnosis of hypovolemia; in the circulation diagnosis, the authors found no difference between theory and cases. The nursing diagnosis for disability is Ineffective Cerebral Perfusion, a condition that has decreased blood circulation to the brain (D.0017). In patients 1 and 2, a diagnosis of Ineffective Cerebral Perfusion was obtained; in the diagnosis of disability, there was no difference between theory and cases.

In the diagnosis of breathing, the authors got the results that patients 1 and 2 had in common because they experienced shortness of breath, then the circulation was only removed in patient 2 because he had complaints of vomiting, while patient 2 had no vomiting, and in disability patients 1 and 2 had the same complaint, namely headache. Factors that support the authors in enforcing nursing diagnoses are the data found to be sufficiently supportive through the results of interview observations conducted by the authors and accompanied by room nurses. The authors refer to specific, measurable, achievable, and reality theory reference literature in setting nursing interventions. In terms of goals and outcome criteria, the concept of theory and cases have in common; that is, they do not have a time limit but still focus on the handling time starting within 10 minutes. The intervention was carried out according to the primary survey problem in patients 1 and 2. The inhibiting factor in establishing nursing interventions was the lack of standard references for emergency nursing interventions, so the authors used the Indonesian Nursing Intervention Standards book reference to determine interventions in patients 1 and

In patient 1, the author obtained doctor's instructions data regarding the management of patients given Citicolin 2 x 500 mg (IV), Mecobalamin 2 x 500 mg (IV), Amlodipine 1 x 10 mg (PO), while in patient 2 received Amlodipine therapy 1 x 10 mg (PO), Domperidone 3 x 10 mg (PO). Nursing implementation was carried out in patients 1 and 2 starting within 10 minutes with a response time of less than five minutes. In patients 1 and 2, breathing was not clear; independent action was taken to give a semi-Fowler's position and collaborate to provide Nasal Cannula oxygen 4 liters/minute with the result that the patient looked comfortable and relaxed, and had reduced shortness of breath, in patient 1 with 98% saturation and respiratory rate of 18x/ minutes, whereas in patient 2 with 97% saturation and respiratory rate of 20x/minute.

In the patient's circulation, 1 is clear, but collaboration is still given by giving isotonic fluid, namely RL 500cc with 20 drops per minute. Whereas in patient 2, circulation was not clear, independent action was given by encouraging the patient to drink orally and collaborative action to provide isotonic fluid therapy, namely RL 500cc with 20 drops per minute and Domperidone 10 mg with the result that the patient drank 300 ccs of sweet tea, elastic skin turgor, membranes Mucosa improves and vomiting decreases. In the disability of patients 1 and 2, it was not clear the independent action of giving a semi-Fowler's position and the collaborative action of giving Amlodipine 10 mg with

reduced headache results. In the stages of managing nursing care in hypertensive patients in the emergency room of TK Hospital. II Moh. Ridwan Meuraksa uses level 2 personal protective equipment: gloves, surgical masks, gowns, eye protection (goggles or face shields), and head coverings. The author's supporting factor in the management of nursing care is cooperation between the patient, the patient's family, and the health team. In contrast, the inhibiting factor is the limited interaction between the writer and the patient, so there are limitations in implementing the writer.

The author evaluated the results obtained in the primary survey action on breathing problems resolved in patient 1 with a respiratory rate of 18x/minute, SPO2 98%, while patient 2 with a respiratory frequency of 20x/minute, SPO2 97%. The success rate for circulation in patient 2 obtained partially resolved results with complaints of vomiting that had decreased by  $\pm$  150 ccs, and it was still recommended to take it orally. The success rate of disability in patients 1 and 2 were partially resolved because there were still complaints of headaches while taking Amlodipine 10 mg (PO). The success rate in patients 1 and 2 is because the patient and family work together in every action, according to the primary survey. After nursing management, the patient still needs further treatment in the Internal Medicine (Lavender) inpatient room. In the evaluation stage, the authors concluded the importance of nurses' role in managing Emergency Hypertension by conducting assessments, providing independent actions, and collaborating with other health teams by applying the principle of a caring attitude in providing caregivers to emergency patients.

## Conclusion

The authors did not find a difference between theory and cases in the research data. It is reviewed from the health data of patients 1 and 2 in clinical manifestations. There is no difference. In carrying out the assessment, the two patients were cooperative when the writer and the nurse were interviewed so that the writer could easily complete the required patient data. The primary survey found three nursing diagnoses, while the second found no. Diagnosis, in theory, is not all found in cases. In breathing, nursing diagnoses were found in both patients, while circulation was only found in patient 2, and nursing diagnoses for disability were found in both patients. In this case, the author discusses the primary survey in patients 1 and 2. The steps in nursing interventions with planning activities include identifying priority issues and objectives, establishing outcome criteria, and determining the actions to be performed on patients 1 and 2. The authors found no difficulty in preparing and planning nursing actions at the intervention stage because it was based on a literature review. At the implementation stage, the authors provide specific nursing actions to be performed on patients based on the primary and secondary surveys. Implementation is carried out by nurses following a predetermined action plan according to patient problems. Implementation can be done properly because of the collaboration between patients and nurses. Every nursing care action that the writer and room nurse has carried out is documented in a note, which helps improve patient care. The nursing evaluation is carried out by observing the patient's response. The primary survey problem in breathing in patient 1 was resolved with reduced shortness of breath results, 98% oxygen saturation with a respiratory rate of 18x/minute, while patient 2 had 97%

oxygen saturation with a respiratory frequency of 20x/minute after being given Nasal Cannula oxygen 4 liters per minute. Patient 2's circulation partially resolved because he was still vomiting  $\pm$  150cc when given oral and isotonic fluid therapy and administered Domperidone 10 mg orally. Disability in patients 1 and 2 was partially resolved after being given Amlodipine 10 mg orally; complaints of headache in patient 1 were reduced on a scale of 2, while patient 2 had a pain scale of 4. After nursing management, the patient still needs further treatment in the inpatient room. In (Lavender) In this case study, the author realizes that the importance of cooperative attitude, family motivation, and encouragement from the patient's loved ones are also supporting factors in achieving the success of nursing care.

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