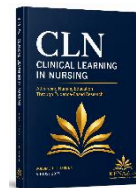


Contents lists available at [Kenazer](https://journal.kenazer.com/index.php/cln/index)

Clinical Learning in Nursing

Journal Homepage: <https://journal.kenazer.com/index.php/cln/index>

Emergency Nursing Care for Patients with Congestive Heart Failure (CHF) with the Nursing Diagnosis of Decreased Cardiac Output: A Case Study

Na'ila Dewi Dzahabiyyah^{1*}, Suryono¹

1. Pamenang Institute of Health Sciences, Kediri, East Java, Indonesia

ARTICLE INFO

Article history:
Received 9 July 2026
Received in revised form
14 July 2026
Accepted 28 July 2026
Available online xxxx

Keywords:
Congestive Heart Failure;
Decreased Cardiac
Output; Cardiac Care;
Emergency Nursing; Case
Study.

ABSTRACT

Background: Congestive Heart Failure (CHF) is a chronic cardiovascular disorder characterized by the heart's inability to pump sufficient blood to meet metabolic demands, resulting in decreased cardiac output and impaired tissue perfusion. Patients commonly experience dyspnea, tachycardia, arrhythmias, orthopnea, and peripheral edema, requiring comprehensive nursing management.

Objective: To describe the implementation of the nursing process and patient outcomes in individuals with congestive heart failure and the nursing diagnosis of decreased cardiac output receiving emergency nursing care in the Intensive Cardiovascular Care Unit (ICVCU).

Methods: This descriptive case study applied the nursing process approach to two adult male patients diagnosed with CHF in the ICVCU of Kediri District Hospital in December 2025. Data were collected through interviews, physical examinations, observations, medical record reviews, vital sign monitoring, electrocardiography (ECG), oxygen saturation, fluid balance, and nursing documentation based on SDKI, SIKI, and SLKI. Data were analyzed descriptively throughout the nursing process.

Discussion: Both patients were diagnosed with decreased cardiac output based on similar clinical findings. Cardiac care interventions included hemodynamic and ECG monitoring, oxygen therapy, fluid balance monitoring, semi-Fowler positioning, and collaboration in antiarrhythmic therapy. After four days, both patients showed reduced dyspnea, improved oxygen saturation, more stable vital signs, improved peripheral perfusion, and better ECG findings, although the nursing diagnosis was partially resolved.

Conclusion: Cardiac care interventions effectively improved the clinical condition and hemodynamic stability of patients with CHF experiencing decreased cardiac output.

* Corresponding author: * nailadewii29@gmail.com (N, Dewi)

@ 2026 The Author(s). Published by Kenazer Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>)

1. Introduction

The heart plays a key role in pumping blood throughout the body. This process distributes oxygenated and nutrient-rich blood to various organs and tissues to ensure optimal function. Furthermore, the heart maintains blood pressure and circulation, as well as supplying the heart muscle with oxygen through the coronary arteries. Heart dysfunction can significantly impact the body. When the heart's ability to pump blood decreases, oxygen and nutrient distribution to the tissues becomes suboptimal, leading to organ dysfunction. In more severe cases, this disorder can develop into congestive heart failure (CHF), which is the heart's inability to pump enough blood to meet the body's tissue oxygen and nutrient needs (Lukitasari et al., 2021).

Based on data from the World Health Organization (WHO) in 2023, cardiovascular disease was the leading cause of death globally, with a death toll reaching 17.5 million out of 58 million global cases (Rizqi et al., 2025). One form of cardiovascular disease with high morbidity and mortality rates is congestive heart failure (CHF). In Indonesia, the prevalence of heart failure remains quite high. Based on data from the 2018 Basic Health Research (Riskesdas), the prevalence of heart failure diagnosed by doctors was 1.5%, or approximately 1,017,290 people (Natasha et al., 2025). Meanwhile, based on the results of the 2023 Indonesian Health Survey (SKI), the prevalence of heart disease diagnosed by doctors was recorded at 0.85%, or around 877,531 people. Regionally, East Java Province ranks second with the highest number of Congestive Heart Failure (CHF) sufferers in Indonesia, namely 152,878 people based on the 2018 Basic Health Research (Riskesdas) data. At the health service level, based on the results of a survey in the ICVCU Room of Kediri Regency Hospital in 2024, 728 patients were treated with a diagnosis of Congestive Heart Failure (CHF).

Congestive Heart Failure (CHF) is a chronic clinical condition that occurs when the heart is unable to pump blood effectively to meet the body's metabolic needs. The heart's inability to pump blood optimally results in a reduction in the volume of blood ejected per minute (cardiac output), resulting in inadequate tissue perfusion. This condition results in an inadequate supply of oxygen and nutrients to body tissues. Decreased heart pump function in patients with CHF is closely related to the emergence of nursing problems such as decreased cardiac output. This problem is characterized by symptoms such as shortness of breath, fatigue, activity intolerance, tachycardia, and changes in blood pressure (PPNI, 2017)

Based on the above problems, it is important to provide nursing care to patients with Congestive Heart Failure (CHF) who experience decreased cardiac output to prevent worsening of the condition, so the author is interested in compiling a report "Nursing Care for Patients with Congestive Heart Failure (CHF) with Nursing Problems of Decreased Cardiac Output in the ICVCU Room of Kediri Regency Hospital"

2. Method

2.1. Study Design

This study employed a descriptive case study design using the nursing process approach to explore emergency nursing care for patients with Congestive Heart Failure (CHF) experiencing decreased cardiac output. The nursing process consisted of assessment, nursing diagnosis, planning, implementation, and evaluation.

2.2. Setting

The study was conducted in the Intensive Cardiovascular Care Unit (ICVCU) of Kediri District Hospital, Indonesia. Nursing care was provided over four days from December 15 to December 18, 2025.

2.3.Participants

The participants consisted of two adult patients diagnosed with Congestive Heart Failure (CHF). The first participant was a 50-year-old male (Mr. S), while the second participant was a 63-year-old male (Mr. S). Both patients were admitted to the ICVCU with signs and symptoms indicating decreased cardiac output and were selected purposively as representative clinical cases.

2.4.Instruments

Data were collected using standardized nursing assessment instruments, including patient interview forms, physical examination, observation sheets, medical record review, vital sign monitoring, electrocardiography (ECG) findings, oxygen saturation measurements, fluid balance records, and nursing documentation based on the Indonesian Nursing Diagnosis Standards (SDKI), Indonesian Nursing Intervention Standards (SIKI), and Indonesian Nursing Outcome Standards (SLKI). The nursing process framework served as the primary clinical assessment guideline.

2.5.Data Collection

Data collection was conducted through direct patient interviews, physical examinations, clinical observations, documentation review, and continuous monitoring during nursing care. Subjective and objective data were obtained during the assessment phase, followed by daily evaluation of patient responses after nursing interventions throughout hospitalization.

2.6.Data Analysis

Data were analyzed descriptively using the nursing process framework. Subjective and objective findings were organized to establish nursing diagnoses, formulate intervention plans, implement nursing care, and evaluate patient outcomes. The analysis focused on comparing clinical findings with existing theoretical concepts and nursing standards to determine the appropriateness of nursing interventions and patient responses.

3. Result

The assessment was conducted on December 15, 2025, at 19.10 WIB on patient 1, Mr. S, aged 50 years, with complaints of shortness of breath and palpitations. From the results of the assessment and physical examination, it was found that the patient had a history of heart disease since 2023. Subjective data obtained: the patient complained of weakness, shortness of breath, and palpitations. In objective data, there was a CRT > 3 seconds, high blood pressure 135/92 mmHg, Pulse 102 x / minute (tachycardia), RR 28 x / minute, cyanotic skin, weak peripheral pulses, ECG picture: Atrial fibrillation, marked right axis deviation, RBBB with RAD - possible left posterior fascicular block; inferior ST-T abnormality is age- and gender relate abnormal ECG.

Furthermore, the assessment was conducted on December 15, 2025, at 20.40 WIB on patient 2, Mr. S, 63 years old, with the main complaints of shortness of breath and palpitations. From the results of the assessment and physical examination, it was found that the patient had a history of heart disease since August 2025. Subjective data of the patient included complaints of shortness of breath, palpitations, and coughing. In objective data CRT >3 seconds, high blood pressure 139/ 104 MmHg, Pulse 111 x / minute (tachycardia), RR 24 x / minute, cyanotic skin, weak peripheral pulses, there was edema in the legs grade 2, ECG picture Atrial flutter with rapid ventricular response with 2: 1 A: V block markrf left axis deviation inferior Q waves may be due to cardiomyopathy left ventricular hypertrophy lateral ST-T abnormality is probably due to the ventricular hypertrophy abnormal ECG.

Heart dysfunction can significantly impact the body. When the heart's ability to pump blood decreases, oxygen and nutrient distribution to tissues is suboptimal, leading to organ dysfunction. In more severe cases, this disorder can progress to congestive heart failure (CHF), which is the heart's inability to pump enough blood to meet the body's tissue needs for oxygen and nutrients (Lukitasari et al., 2021). Congestive Heart Failure (CHF) occurs due to impaired systolic and diastolic ventricular function, leading to decreased cardiac output. If not treated promptly, this condition can worsen the patient's condition.

From the data grouping, a nursing diagnosis was obtained based on priority, namely a decrease in cardiac output related to changes in contractility, as evidenced by the patient complaining of shortness of breath and objective data obtained, including CRT <3 seconds, cyanotic skin, high blood pressure, and weak peripheral pulses.

Table 3.1. Nursing Actions

No. Dx	Action
1	- Identify primary signs/symptoms of decreased cardiac output (including dyspnea, fatigue, edema, orthopnea) - Identify secondary signs/symptoms (including palpitations, rales, oliguria, cough, pale skin) - Monitor blood pressure - Monitor fluid intake and output - Monitor oxygen saturation - Monitor arrhythmias - Position the patient in a semi-Fowler's or Fowler's position with the feet down - Administer oxygen to maintain oxygen saturation >94% - Collaborate with antiarrhythmics

The results of the nursing diagnosis evaluation of decreased cardiac output in patient 1 (Mr. S) were carried out for 4 days with the following results: the first day of evaluation was carried out on Tuesday, December 16, 2025 at 07.00 WIB, subjective data was obtained from the patient saying he still felt short of breath, fatigue was still there, palpitations were still there, coughing was still there and objective data was obtained There were still additional rhonchi breaths, pale skin was still there, BP: 135/92 MmHg, HR: 135x/minute, Spo2: 93% installed oxygen NRBM 15 lpm, pulse strength was still a little weak, ECG results: Atrial fibrillation right bundle branch block septal infarct, T wave abnormality, consider inferior ischemia, Abnormal ECG, and fluid balance -750 cc/7 hours. The nursing problem of decreased cardiac output has not been resolved; the intervention is continued. The second day of evaluation was carried out on Wednesday, December 17, 2025 at 07.00 WIB, the patient's subjective results showed that he still felt short of breath, fatigue was still present, heart palpitations were intermittent, coughing was still present and objective data showed that there were still additional rhonchi, pale skin was absent, BP: 107/62 MmHg, HR: 94x/minute, Spo2: 97% oxygen was installed NRBM 15 lpm, pulse strength was still slightly weak, ECG results: Atrial fibrillation right bundle branch block septal infarct, T wave abnormality consider inferolateral ischemia, Abnormal ECG, and fluid balance -3500 cc. The nursing problem of decreased cardiac output had not been resolved; the intervention was continued. The third day of evaluation was carried out on Thursday, December 18, 2025 at 07.00 WIB, subjective data obtained from the patient said he still felt short of breath, fatigue reduced, heart palpitations reduced, coughing still present and objective data obtained there were still additional breaths of rhonchi, pale skin was absent, BP: 110/98 MmHg, HR: 103x/minute, Spo2: 98% with oxygen mask 10 lpm, pulse strength improved, ECG results: Atrial fibrillation with rapid ventricular response right bundle branch block septal infarct, T wave abnormality, consider inferolateral ischemia, Abnormal

ECG, and fluid balance -1770 cc. The nursing problem of decreased cardiac output was partially resolved; the intervention was continued. The fourth day of evaluation was carried out on Thursday, December 18, 2025 at 16.00 WIB, subjective data obtained from the patient stated that he no longer felt short of breath, fatigue had decreased, heart palpitations had decreased, coughing was still present and objective data obtained that there were still additional rhonchi breaths, pale skin was absent, BP: 118/87 MmHg, HR: 95x/ minute, Spo2: 98% with nasal cannula oxygen 3 lpm, pulse strength was no longer weak, ECG results: Atrial fibrillation with rapid ventricular response right bundle branch block septal infarct, T wave abnormality, consider inferolateral ischemia, Abnormal ECG, and fluid balance -470 cc/ 8 hours. The nursing problem of decreased cardiac output was partially resolved; the intervention was continued by the nurse in the next room.

The results of the nursing diagnosis evaluation of Decreased cardiac output in patient 2 (Mr. S) were carried out for 4 days with the following results: the first day of evaluation was carried out on Tuesday, December 16, 2025 at 07.00 WIB, subjective data obtained showed that the patient still felt short of breath, fatigue was still present, palpitations were still present, coughing was still present and objective data obtained were still additional breaths of rhonchi, edema in both legs grade 2, pale skin was still present, BP: 147/99 MmHg, HR: 140x/minute, Spo2: 97% attached oxygen mask 10 lpm, pulse strength was still slightly weak, ECG results: Atrial flutter with variable AV block with premature ventricular or aberrantly conducted complexes. Left anterior fascicular block. Minimal voltage criteria for LVH, may be normal variant. Possible anterior infarct, Abnormal ECG, and fluid balance results: -1527 cc/7 hours. The nursing problem of decreased cardiac output has not been resolved; the intervention is continued. The second day of evaluation was carried out on Wednesday, December 17, 2025 at 07.00 WIB, the patient's subjective results showed that he still felt short of breath, fatigue was still present, heart palpitations were reduced, coughing was still present and objective data showed that there were still additional rhonchi, there was edema in the legs grade 1, pale skin was absent, BP: 130/98 MmHg, HR: 118x/minute, Spo2: 98%, oxygen mask 10 lpm was installed, pulse strength was still slightly weak, ECG results: Normal sinus rhythm, possible left atrial enlargement, left axis deviation, left ventricular hypertrophy, anterior infarct. T wave abnormality; consider lateral ischemia. Abnormal ECG, and fluid balance results were -5445 cc. The nursing problem of decreased cardiac output had not been resolved; the intervention was continued. The third day of evaluation was conducted on Thursday, December 18, 2025 at 07.00 WIB, the patient's subjective data showed that shortness of breath had decreased, fatigue had decreased, heart palpitations had decreased, coughing was still present and the objective data showed that additional rhonchi sounds were no longer present, edema in the legs was no longer present, pale skin was absent, BP: 125/90 MmHg, HR: 98x/minute, Spo2: 98% with nasal cannula oxygen 3lpm, pulse strength was no longer weak, ECG results: Sinus rhythm with occasional premature ventricular complexes and premature atrial complexes, possible left atrial enlargement, left axis deviation, left ventricular hypertrophy with repolarization abnormality, abnormal ECG and fluid balance -1690 cc. The nursing problem of decreased cardiac output had not been resolved; the intervention was continued. The fourth day of evaluation was carried out on Thursday, December 18, 2025 at 16.00 WIB, subjective data obtained from the patient stated that he no longer felt short of breath, fatigue had decreased, heart palpitations had decreased, coughing had decreased and objective data obtained that there were no additional breath sounds of rhonchi, pale skin was absent, BP: 129/87 MmHg, HR: 94x/minute, Spo2: 98% with nasal cannula oxygen 3 lpm, pulse strength was no longer weak, ECG results: Sinus rhythm with occasional premature ventricular complexes and premature atrial complexes possible left atrial enlargement left axis deviation left ventricular hypertrophy with repolarization

abnormality, abnormal ECG and fluid balance -690 cc/8 hours Nursing problems of decreased cardiac output were partially resolved, intervention was continued by the nurse in the next room.

4. Discussion

Based on the assessment data obtained, the similarities between patient 1 (Mr. S) and patient 2 (Mr. S) are that they are male, with Mr. S (50 years old) and Mr. S (63 years old). According to (Priandani et al., 2024), gender influences heart failure, with men generally being at greater risk of heart failure than women. This is because women have estrogen, a hormone that influences how the body handles fat and cholesterol (Priandani et al., 2024). Estrogen increases the ratio of high-density lipoprotein (HDL), a protective factor in preventing atherosclerosis. In the author's opinion, the high risk in men may also be influenced by unhealthy lifestyles, such as smoking, a high-fat diet, and lack of physical activity, which can increase the risk of cardiovascular disease, including congestive heart failure (CHF).

The second piece of data from the assessment results obtained in the two patients showed an age difference, where patient 1 (Mr. S) was 50 years old, while patient 2 (Mr. S) was 63 years old. According to the theory found, increasing age causes the heart and blood vessels to experience both structural and functional changes. With increasing age, the aorta and arteries become stiff and crooked. This change is due to the loss of elastic fibers in the medial layer of the arteries. This aging-related change process increases strength and thickness, called atherosclerosis, which is one of the causes of heart failure (Priandani et al., 2024). In the author's opinion, there is no gap between fact and opinion. The age difference in the two patients shows that as a person ages, the risk of Congestive Heart Failure (CHF) also increases. This is because at an older age, there is a decline in heart function and blood vessel elasticity, so the heart's ability to pump blood throughout the body becomes less optimal. In addition, the aging process can also accelerate degenerative changes in the cardiovascular system that contribute to heart failure. Therefore, the author believes that age has a fairly strong relationship with the incidence of Congestive Heart Failure (CHF), because physiological changes due to aging can increase the workload of the heart and increase the possibility of heart dysfunction.

The third piece of data from the assessment results found that both patients had a history of smoking. Patient 1 (Mr. S) was 50 years old with a smoking history of 30 years, and patient 2 (Mr. S) was 63 years old with a smoking history of 33 years. According to the theory, smoking is one of the modifiable risk factors for cardiovascular disease. Substances contained in cigarettes can cause a decrease in the oxygen capacity in the blood that will be transported to the heart. The effect of smoking causes an increased load on the myocardium due to stimulation by catecholamines and, according to oxygen consumption due to inhalation, which results in tachycardia and vasoconstriction of blood vessels. Direct exposure that occurs can cause the walls of blood vessels to release inflammatory mediators and cytotoxins that will indirectly cause damage to the walls of blood vessels. Nicotine contained in cigarettes causes the formation of Reactive Oxygen Species (ROS), which causes necrosis in endothelial cells. Adhesion molecules and activated macrophages facilitate adhesion and play a role in digesting oxidized lipids that circulate freely in the blood vessels, which adhere to the endothelial layer, causing thickening of the endothelium and narrowing of the blood vessels, so that the workload of the heart increases, a compensatory mechanism occurs and if it continues for a long time, it will experience decompensation and result in heart failure (Rahmawati et al., 2025). In the author's opinion, long-term smoking can cause damage to blood vessels, reduce oxygen supply to tissues, and increase the workload of the heart. This condition can accelerate the development of cardiovascular disorders, which ultimately contribute to heart failure. Based on smoking history, there is no discrepancy between the data and theory, which shows that the risk of developing cardiovascular disease is greater in someone who smokes.

The fourth piece of data from the main complaint assessment results showed that patient 1 (Mr. S), 50 years old, and patient 2 (Mr. S), 63 years old, both experienced shortness of breath accompanied by heart palpitations. According to theory, shortness of breath is a common symptom in CHF patients. Shortness of breath is the primary complaint experienced by patients due to impaired oxygenation, where the heart's main pumping chamber becomes enlarged, and the heart muscles cannot function properly, resulting in a buildup of lung fluid that causes shortness of breath (Andrianto, 2019 dalam Sembiring & Siregar, 2024). In the author's opinion, the shortness of breath experienced by both patients indicates a disturbance in the heart's pumping function, preventing blood from being pumped effectively throughout the body. This condition results in fluid buildup in the lungs, which disrupts oxygen exchange, leading to shortness of breath.

The fifth piece of data in the results of the assessment showed a difference in that patient 1 (Mr. S), 50 years old, had no edema in the legs, and in patient 2 (Mr. S), 63 years old, there was edema in both legs, grade 2. According to the theory, edema is a condition of blocked veins and occurs due to an increase in intravascular hydrostatic pressure, namely the pressure that pushes blood to flow in the vasculature by the work of the heart pump. Edema in the extremities can cause various complications, one of which is foot edema, which is defined as the accumulation of fluid in the feet and legs caused by the expansion of interstitial volume or an increase in extracellular volume (Adi et al., 2024). In the author's opinion, the differences in edema in the two patients indicate a relationship between the heart's ability to pump blood and fluid retention. In patient 2, the presence of grade 2 edema in both legs was likely caused by increased venous pressure due to decreased cardiac function in pumping blood optimally, resulting in fluid retention in the lower extremities.

Based on the results of the data analysis and problem formulation that have been carried out, the author determined the main nursing diagnosis in both patients, namely decreased cardiac output related to changes in contractility as evidenced by the patient complaining of shortness of breath and obtaining objective data of CRT > 3 seconds, cyanotic skin, high blood pressure, and weak peripheral pulses. The determination of this diagnosis has been adjusted to the theory that decreased cardiac output is the inability of the heart to pump blood to meet the body's metabolic needs (PPNI, 2017). Based on the data from the assessment results that have been determined to be carried out on both patients, signs and symptoms were found that support the diagnosis of decreased cardiac output, such as patients complaining of shortness of breath, palpitations, arrhythmia ECG images, edema, increased/decreased blood pressure, CRT > 3 seconds, and pale skin color. Thus, the clinical facts found in both patients show a match between the data obtained in the field and the existing theory. This strengthens the determination of the same diagnosis in both patients, namely decreased cardiac output related to changes in contractility as evidenced by the patient complaining of shortness of breath and obtaining objective data: CRT > 3 seconds, cyanotic skin, high blood pressure, weak peripheral pulses (PPNI, 2017)

Based on the assessment and determination of nursing diagnoses in patient 1 and patient 2, nursing interventions or nursing plans were prepared in accordance with the SIKI according to the Indonesian Nursing Intervention Standards (PPNI, 2018) Nursing interventions are all forms of therapy carried out by nurses based on clinical knowledge and judgment to achieve improvement, prevention, and recovery of the health of individual clients, families, and communities. Interventions with a primary nursing diagnosis of decreased cardiac output, namely cardiac care, are arranged actions that include identifying primary signs/symptoms of decreased cardiac output (including dyspnea, fatigue, edema, orthopnea), identifying secondary signs/symptoms (including palpitations, wet rales, oliguria, cough, pale skin), monitoring blood pressure, monitoring fluid intake and output, monitoring oxygen saturation, monitoring arrhythmias, positioning the patient in semi-Fowler or Fowler position with the feet down,

providing oxygen to maintain oxygen saturation >94%, and collaborating with antiarrhythmic administration.

Nursing care planning for patients 1 and 2 was developed based on theoretical concepts referring to the Indonesian Nursing Intervention Standards (SIKI). However, its implementation was adjusted to each patient's individual condition to ensure optimal achievement of the desired outcome criteria. The study also followed a systematic planning process, from prioritizing problems to establishing outcome criteria.

According to Indonesian Nursing Intervention Standards (PPNI, 2018), nursing evaluation is the final stage in nursing care, which aims to assess the effectiveness of the interventions that have been implemented. Nursing evaluation includes assessing whether nursing goals have been achieved, which is indicated by a decrease in clinical symptoms such as decreased dyspnea, decreased pallor, decreased arrhythmia on ECG, decreased edema, improved capillary refill, and evaluation based on SOAP (Subjective, Objective, Analysis, and Planning) to determine the continuation of the intervention.

5. Conclusion

The results of the assessment of both patients had the same main symptoms in the form of shortness of breath, palpitations, tachycardia, arrhythmia, ECG picture, CRT > 3 seconds, hepatomegaly, and pale skin color.

The nursing diagnosis established is decreased cardiac output, interventions focus on cardiac care which includes identifying primary signs/symptoms of decreased cardiac output (including dyspnea, fatigue, edema, orthopnea), identifying secondary signs/symptoms (including palpitations, wet rales, oliguria, cough, pale skin), monitoring blood pressure, monitoring fluid intake and output, monitoring oxygen saturation, monitoring arrhythmias, positioning the patient in semi-Fowler or Fowler position with the legs down, providing oxygen to maintain oxygen saturation >94%, and collaborating with antiarrhythmic administration. Nursing evaluation for 4 days found that the first patient, Mr. S, and the second patient, Mr. S, experienced improvements in condition, resulting in reduced shortness of breath, decreased pale skin, improved capillary refill, reduced edema in the extremities, and improved ECG results for arrhythmia.

References

- [Adi, A. W. N., Krisnamurti, M. H., Brikana, J., Nugroho, A., Putra, E. P., Maria, A., Narmada, V., & Kustanti, C. Y. \(2024\). Efektivitas Elevasi Kaki 30° Untuk Menurunkan Edema Pada Pasien Congestive Heart Failure di Ruang Intensive Cardiology Care Unit: Case Report. *Prosiding STIKES Bethesda*, 4\(1\), 304–310.](#)
- [Lukitasari, M., Nugroho, D. A., Rohman, M. S., Turi, I. K., & Dima, N. \(2021\). *Gagal Jantung: Perawatan Mandiri dan Multidisiplin*. UB Press.](#)
- [Natasha, N., Jaya, H. K., & Faizal, M. \(2025\). *Faktor-Faktor Yang Berhubungan Dengan Peningkatan Kejadian Congestive Heart Failure \(CHF \) Pada Pasien Dewasa Di Rawat*](#)

- Jalan RSUD Dr. (H.C.) Ir. Soekarno Provinsi Kepulauan Bangka Belitung Tahun 2024. Jurnal Kesehatan Tambusai, 6(2), 7763–7771.
- PPNI. (2017). Standar Diagnosis Keperawatan Indonesia Definisi dan Indikator Diagnostik (1st ed.). DPP PPNI.
- PPNI. (2018). Standar Intervensi Keperawatan Indonesia Definisi dan Tindakan Keperawatan (1st ed.). DPP PPNI.
- Priandani, Kusumajaya, H., & Permatasari, I. (2024). Faktor-Faktor Yang Berhubungan Dengan Kejadian Congestive Heart Failure (CHF) Pasien. Jurnal Penelitian Perawat Profesional, 6(1), 273–284.
- Rahmawati, P. P., Kusumajaya, H., & Meiland, R. (2025). Faktor-Faktor yang berhubungan dengan kualitas hidup pada pasien congestive heart failure (CHF) pada usia dewasa di RSUD Dr. (H.C.) Ir. Soekarno Provinsi Bangka Belitung Tahun 2024. Jurnal Sosial Dan Teknologi, 5(4), 1040–1052.
- Rizqi, M. R. B., Karyawati, T., & Silahudin, M. (2025). Asuhan Keperawatan pada Tn . H dengan Gangguan Sistem Kardiovaskular : Congestive Heart Failure (CHF) di Ruang Dahlia RSUD dr . Soeselo Kabupaten Tegal. Protein: Jurnal Ilmu Keperawatan Dan Kebidanan, 3(4), 151–162.
- Sembiring, S. E. br, & Siregar, N. (2024). Asuhan Keperawatan Pada Pasien Congestive Heart Failure Dengan Penerapan Deep Breathing Exercise Dalam Upaya Menurunkan Frekuensi Napas Di Ruang Icu Rumah Sakit Tentara TK IV O1.07.01 Pematang Siantar. Jurnal Akper Kesdam, 8(2).