



READMISSION INCIDENCE RATES FOR HEART FAILURE PATIENTS

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ABSTRACT

Problem: Heart Failure is one of the chronic diseases with the highest readmission duration in Indonesia. Of the 10 medical records of heart failure patients, 6(60%) had a readmission and 4(40%) did not have a readmission, this is because the readmission reporting to review re-hospitalized patients with the same case has not been carried out but the hospital only makes a report on the top 10 illness every month and year, causing an impact that can result in the absorption of funds beyond normal limits so that costs are difficult to control. **Objective:** To determine readmission rates based on time of occurrence, patient gender and age of heart failure patients. **Method:** This type of research is observational with a quantitative descriptive design. The population and sample were 137 inpatient medical records of heart failure patients for the period January to December 2022. The data used in this research was secondary data obtained by observation using an observation sheet, then the data was processed and analyzed univariately using a frequency distribution. **Results:** Of the 137 heart failure patients, it was found that the number of readmission events within a period of ≤ 1 month was 24(17.5%) patients with 16(66.7%) in the age group 56-65 years and over and 83(60%) the patient did not experience readmission, apart from one of the factors that cause re-hospitalization in heart failure patients is non-compliance with medication therapy, excessive physical activity, non-compliance with medical treatment, not recognizing the clinical signs and symptoms of heart failure, and the patient violates dietary restrictions. There needs to be education regarding care from staff that needs to be carried out by patients when the patient is allowed to go home, so as to maintain the quality of service to patients.

Keywords : Age; Gender; Heart Failure; Readmissio

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1. INTRODUCTION

Medical records are the main data source in the hospital reporting process and service costs with the aim of increasing the efficiency and effectiveness of health insurance using the principles of managed care. Managed care is a health service financing system in the National Health Insurance (JKN) Era, however in the JKN financing system using the case base group payment system (INA-CBG'S) it cannot control patient readmission which functions as a quality dimension of hospital effectiveness and technical competence (Rachmad, 2015).

However, the JKN financing system using the case base group payment system (INACBGS) cannot control readmission patients. Readmission is also a quality dimension of hospital effectiveness and technical competence. Based on the Decree

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Standards of the Minister of Health of the Republic of Indonesia number 4 of 2019 concerning Technical Standards for Fulfilling Basic Service Quality in Minimum Service Standards in the Health Sector which contains the incidence of re-hospitalization (readmission) if not returned to care within ≤ 1 month, this means the quality of home services the pain is good.

Readmission is the process of being re-hospitalized more than once in less than 30 days after returning from the hospital and being declared cured and treated in the same hospital with the same conditions (Atmiroseva & Nurwahyuni, 2017). Hidayat (2016) said that readmission is an unexpected case in the implementation of INA CBG's, this is because it can result in the absorption of funds beyond normal limits so that costs are difficult to control where INA CBG's is a claim payment system by BPJS for health services with payment per case over a period of time. which has been determined, if the time limit exceeds that which has been determined, the costs will be borne by the hospital, therefore the hospital must provide services effectively and efficiently so that readmission cases can be reduced.

Heart failure is one of the chronic diseases with the highest readmission duration in Indonesia. Heart failure patients can experience a high risk of readmission and even return to the emergency department within 30 days after being discharged from the hospital (Siallagan et al., 2018). Heart failure is the inability of the heart to pump enough blood to meet the tissue's need for oxygen and nutrients, which is characterized by signs and symptoms of excess fluid or inadequate tissue perfusion. Fluid overload and decreased tissue perfusion occur when the heart cannot produce enough oxygen to meet the body's demand. Heart failure is a progressive, lifelong condition that is managed with lifestyle changes and medications to prevent acute episodes of heart failure decompensation. Heart failure is closely related to increased hospitalizations, increased health care costs and decreased quality of life (Brunner and Suddarth, 2010).

Recurrence of heart failure patients results in patients being readmitted again. Patients who were rehospitalized experienced relapses when they did not comply with medical therapy, did excessive physical activity, did not comply with medical treatment, did not recognize clinical signs and symptoms of heart failure, and patients violated dietary restrictions (Hidayah & Wahyuningtyas, 2018). The readmission risk factors consist of age, gender, Body Mass Index (BMI), patient education, social status, economic status, race, comorbid disease, employment status, length of hospital stay, failure to convey important information in outpatient care, the number of discharge medications and many other factors that cause readmission after 30 days of discharge (Auerbach et al, et al, 2016). Based on research results (Tarigen, 2020) from various research results that have been reviewed by researchers, it shows that the prevalence of heart failure patients increases approximately 10% in patients aged 60 years and tends to be re-admitted frequently with increasing age. This is in accordance with research results which show that the majority age category of patients is 50-60 years old, as are 9 (32.2%) patients.

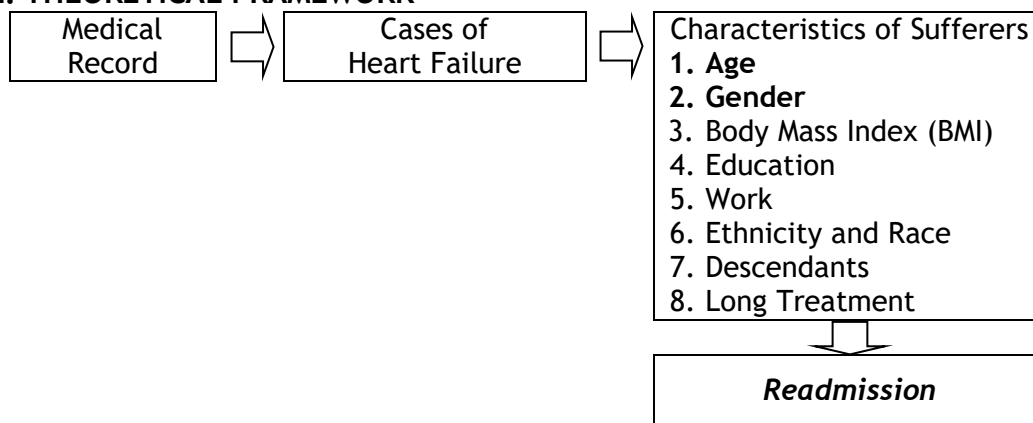
Harapan and Doa Hospital, Bengkulu City, is a government-owned referral hospital for Level 1 Type C Health Facilities with complete accreditation. This hospital provides services in the health sector which are supported by specialist doctor services and supported by other medical facilities. Based on the results of initial observations carried out on November 22 2022, there were 137 medical record files for heart failure patients for the period January-December 2022. Of the 10 medical records of heart failure patients, 6 (60%) had readmission and 4 (40%) had no readmission. , this is because the readmission reporting to review re-hospitalized patients with the same case has not been carried out, but the hospital only makes reports of the top 10 illnesses every month and year, thus causing an impact that can result in Absorption of funds is beyond normal limits so that costs are difficult to

control, where INA-CBG's is a claim payment system by BPJS for Health services which is paid per case within a predetermined time period of ≤ 1 month, if it exceeds the predetermined time allotment then the costs are borne by the house Sick. Therefore, hospitals must provide services effectively and efficiently so that readmission cases can be reduced (Hidayat, 2016).

According to (Victoria, 2020) by increasing education to patients and the patient's family regarding the care that needs to be given to the patient when the patient is allowed to go home, such as compliance with taking medication and timely control, so that patients do not require repeated hospitalization, thereby reducing the number of incidents, readmission of heart failure cases returning to treatment ≤ 1 month.

Based on this description, seeing the importance of monitoring readmission events, researchers are interested in analyzing the number of readmission events in heart failure cases at Harapanan Doa Regional Hospital, Bengkulu City.

2. THEORETICAL FRAMEWORK



3. METHODOLOGY

This type of research is observational with a quantitative descriptive design. The population and sample were 137 inpatient medical records of heart failure patients for the period January to December 2022. The data used in this research was secondary data obtained by observation using an observation sheet, then the data was processed and analyzed univariate using a frequency distribution.

4. RESULTS AND DISCUSSIONS

a. Readmission Rates for Heart Failure Patients Based on Time and Gender

Tabel 1. Readmission Rates for Heart Failure Patients Based on Time and Gender

Readmission	Gender				Amount	
	P		L			
	Σ	%	Σ	%	Σ	%
≤ 1	16	66,7	8	33,3	24	17,5
≥ 1	17	56,7	13	43,3	30	21,9
No	39	47	44	53	83	60,6
Amount	72	52,5	65	47,5	137	100

Source: Secondary Data, 2022

The incidence of readmission for heart failure patients based on time is the number of patients who are re-hospitalized within a certain time period. Based on the Standard Decree of the Minister of Health of the Republic of Indonesia Number 4 of 2019 concerning Technical Standards for Fulfilling Basic Service Quality in the

Minimum Service Standards for the Health Sector which contains readmission incidents, if you do not return to treatment within ≤ 1 month this means the quality of the hospital service is good.

Based on the results of research conducted on 137 heart failure patients from January to December 2022, it was found that the number of readmission events within a period of ≤ 1 month was 24 (17.5%) patients and 83 (60%) patients did not experience a readmission. This is in contrast to the Minister of Health of the Republic of Indonesia Number 4 of 2019 which states that patients do not return to treatment within a period of ≤ 1 month with the standard that has been set, namely 100%.

According to Hidayah (2018), in his research, there are several things that can trigger heart failure patients to return to treatment, namely patients who are rehospitalized experience a relapse when they are not compliant with treatment therapy, do excessive physical activity, do not comply with medical treatment, do not recognize clinical signs and symptoms of heart failure and patients violating dietary restrictions. Recurrence in kidney failure patients does not only come from internal factors in the hospital, such as the care and treatment given by/hospital staff to the patient, but patients who have been said to be improving and are allowed to go home must be treated again because of the factors that occur. outside the Hospital. Healing of heart failure patients can be said to be difficult, heart failure patients cannot be said to have recovered completely so patients must undergo control every month for maximum recovery after the patient is allowed to go home by hospital staff.

Therefore, heart failure patients must be paid attention to in terms of treatment, administration of medication and patients who have been allowed to go home should be given regular check-ups to the doctor so that the patient does not have a readmission at the hospital.

b. Readmission Rates for Heart Failure Patients Based on Time and Age Group

Tabel 2. Readmission Rates for Heart Failure Patients Based on Time and Age Group

Readmission	Age(thn)										Amount	
	20-25		26-35		36-45		46-55		56-65			
	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%	Σ	%
≤ 1	0	0	2	8,3	3	12,5	3	12,5	16	66,7	24	17,5
≥ 1	3	10	2	6,7	4	13,3	7	23,3	14	46,7	30	21,9
No	9	10,8	13	15,7	15	18,1	21	25,3	25	30,1	83	60,6
Amount	12	8,8	17	12,4	22	16,1	31	22,6	55	40,1	137	100

Source: Secondary Data, 2022

The results of the study showed that of the 137 patients, the majority of 83(60.6%) patients did not experience a readmission but there were still 24(17.5%) patients who experienced a readmission within a period of ≤ 1 month with 16(66.7%) in the age group 56-65 years and over, and 30(21.9%) patients ≥ 1 month. According to Vctoria Tiara's research (2020), it was shown that of 28 patients, the majority were women who experienced readmission for heart failure, 16 (57.1%) while 12 (42.9%) were men. Mahadri Dhrik (2023) said that in his research the majority of heart failure patients (68.96%) were in the elderly category, namely over 60 years, compared to the adult category with ages over 45-60 years as much as 31%.

In line with Juenger et al (2019), men are more likely to have better bodily function abilities than women, especially in physical terms. The impact of decreased physical function ability will affect a person's degree of heart failure. Risk factors in the development of heart failure and patient prognosis show differences between men and women, the main causes of heart failure in women are hypertension and

vascular disease. Women with heart failure tend to have a lower quality of life than men, in this case the normal value of brain natriuretic peptide or what is called Brain Natriuretic Peptide (BNP) in women is greater than in men and abnormal values with $BNP > 500 \text{ Pg/ml}$ may be a stronger predictor of death in women with heart failure than in men. The peptide BNP is a biomarker that is used more frequently to identify patients with symptoms of heart failure and stratify patients at risk.

Mahadri Dhrik (2023) said that in his research the majority of heart failure patients (68.96%) were in the elderly category, namely over 60 years, compared to the adult category with ages over 45-60 years as much as 31%. In line with Amu (2018), patients with heart failure are often found in the elderly group because as age increases, the vulnerability to the risk of cardiovascular disease increases because the elasticity of the arteries decreases, thereby increasing the incidence of hypertension and other complications. People with advanced age experience anatomical, physiological and anatomical pathological changes. The anatomical change in question is the thickening of the left ventricular wall, even though blood pressure is relatively normal. Likewise, heart valves experience fibrosis and calcification, especially in the mitral annulus and aortic valve. Apart from that, there is a reduction in the number of cells in the sinoatrial node which causes the heart's electrical conduction to be disturbed so that it tends to be more vulnerable.

5. CONCLUSION

The incidence of readmission at Harapan and Doa Hospital, Bengkulu City within a period of ≤ 1 month was 24(17.5%) patients with 16(66.7%) being in the age group 56-65 years and over and 83(60%) patients not experiencing readmission, apart from one of the factors that cause re-hospitalization in heart failure patients is non-compliance with medication therapy, excessive physical activity, non-compliance with medical treatment, not recognizing the clinical signs and symptoms of heart failure, and the patient violates dietary restrictions. There needs to be education regarding care from staff that needs to be carried out by patients when the patient is allowed to go home, so as to maintain the quality of service to patients.

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