

Perceived Benefits and Perceived Barriers Toward Satisfaction of JKN-KIS Kidney Failure Patients with a Systems Approach

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Abstract

Indonesia entered the era of National Health Insurance (JKN) in January 1, 2014. Due to the limited availability of hemodialysis services and the fact that the majority of patients with chronic kidney failure are unable to afford them, there is a difference before the JKN when patients with chronic kidney failure attempt to find alternative treatments prior to beginning hemodialysis. This study analyzes perceived benefits and perceived barriers to satisfaction of JKN-KIS kidney failure patients with a systems approach. The design of this study is a mixed method, a quantitative combination using CSI followed by a chi-square test and qualitative with a systematic approach that focuses on collecting and analyzing to obtain comprehensive data for the period January-August 2021. Based on the CSI method, it was found that the satisfaction rate was 80.1%, which means very satisfied. Chi-square analysis shows that perceived benefit is significantly associated with satisfaction (p -value<0.05), with adjusted OR=9,000 (95%CI: 3,573-22,673), as well as perceived barrier with adjusted OR=8,800 (95%CI: 1,575-49,162). Changes in behavior in respondents are influenced by a belief in perceived benefits and obstacles. These changes will be supported by the discovery of threat perception, severity and high severity, as well as the successful socialization received by respondents.

Keywords: BPJS Health, Health Service, Kidney Failure, Perceived, Satisfaction

I. INTRODUCTION

The National Health Insurance-Indonesian Health Card Program (JKN-KIS), which is managed by BPJS Health, covers kidney failure, one of the most devastating and costly diseases.^{1,2} As of February 28, 2021, JKN membership had reached 222,056,973 people.³ BPJS covers the cost of hemodialysis with different Ina-CBGs (Indonesian Casemix Based Group, Ina-CBG) rates according to hospital class. Before the implementation of JKN-KIS, patients with chronic kidney failure often sought alternative treatments before starting hemodialysis due to the limited availability of services and the high cost that most patients could not afford.⁴⁻⁷

The quality of JKN-KIS is strongly influenced by the level of user satisfaction,⁸ which in turn affects trust and the positive image of BPJS Health. User satisfaction is determined by various factors, including perceived benefits and perceived barriers, as described by Nutbeam and Harris.⁹ In Banjarmasin, 680 cases were recorded, accounting for 54.6% of the total chronic kidney disease (CKD) cases in South Kalimantan. The financial burden on the state due to CKD is substantial; in 2017, BPJS Health reported 3,657,691 dialysis procedures at a total cost of 3.1 trillion (10). At Ulin Hospital in Banjarmasin, 35,406 hemodialysis procedures were performed in 2020, with an average of 420 patients undergoing hemodialysis each month. Therefore, this study aims to analyze the factors of Perceived Benefits and Perceived Barriers to user satisfaction with the JKN-KIS program among chronic kidney disease patients undergoing hemodialysis in Banjarmasin.

II. METHODS

This research uses a mixed-method design that combines qualitative and quantitative approaches. Using a systems approach,

qualitative research was conducted to collect information from kidney failure patients participating in JKN-KIS. The total number of informants was 9 people, namely the head of the hemodialysis unit as the key informant, a nurse and 6 patients as the main informant, and the JKN coordinator as the supporting informant. Quantitative research was used to analyze the perceived benefits and perceived barriers to patient satisfaction among JKN-KIS participants. The analysis uses CSI (Customer Satisfaction Indeks) to determine the level of satisfaction and then tests the relationship between variables using the chi-square test. Qualitative research provides contextual information, explains reasons and relationships, evaluates effectiveness and helps develop theory.

Data collection and interviews were conducted at the Hemodialysis Installation of Ulin Banjarmasin Hospital from January – May 2021.

Primary data were obtained from the results of interviews with respondents, which is the most important sampling procedure. At the same time, secondary data from reading sources consisting of reports and national and international research journals come from Google Scholar, PubMed, and ScienceDirect.

III. RESULT AND DISCUSSION

The research period is January – May 2021. During that time span, researchers observed services in the Hemodialysis Unit. During the study period, researchers observed nine (9) informants for interviews and 42 renal failure patients treated in the hemodialysis room whose data were taken using questionnaires.

1. Qualitative Analysis

A. Characteristics of Informants

Informants in this study amounted to nine (9) people, as can be seen in Table 1.

TABLE 1. CHARACTERISTICS OF RESEARCH INFORMANT

Informant	Age	Gender	Education	Position
1	42	Male	Magister of Public Health	Chief of Hemodialysis
2	35	Male	Bachelor of Nursing	Nurse
3	40	Female	Bachelor of Information Technology	Coordinator JKN
4	37	Female	Junior High School	Patient
5	53	Female	Primary School	Patient
6	19	Female	Vocational High School	Patient
7	27	Male	Vocational High School	Patient
8	23	Male	Junior High School	Patient
9	44	Female	Junior High School	Patient

B. Interview Results of Health Worker Informants at the Hemodialysis Installation of Ulin Hospital Banjarmasin

1) Input Aspect

At the Ulin Hospital, Banjarmasin, a total of 35,406 hemodialysis procedures were found in 2020. Meanwhile, the average monthly number of patients undergoing HD in 2020 is 420 people/per month. In South Kalimantan, RSUD Ulin Banjarmasin is the only type A hospital that cooperates with BPJS Health for the treatment of kidney failure patients in receiving referrals from three provinces in Kalimantan, namely South Kalimantan, Central Kalimantan, and East Kalimantan. In terms of facilities and infrastructure, Indonesia still faces challenges in meeting the needs of infrastructure, access and health resources,¹²⁻¹⁴ also policies and subsidies from the center.¹⁵⁻¹⁸

2) Man

"...Health BPJS provides requirements that must be met by HD installations, namely Hypertension Kidney Consultants, doctors on duty, HD certified nurses, administrative staff, and others; whereby the HD installation of Ulin Hospital has fulfilled this, but we are still faced with the problem of the number of personnel, where, of the total nurses in this installation, only some are HD certified because this training is only centered on the island of Java, especially Jakarta, and there are quota restrictions..." (Informant 1)

"...kidney consultants, there are two people, but there is only one person who is on standby because the other one is undergoing a period of education..." (Informant 2)

"...We, as HD administrative staff, are committed to following the path set by the Hospital and BPJS Health because, if we don't follow the flow, there will be no disbursement of funds..." (Informant 3)

The availability of health workers is a supporter of health services, so the shortage of health workers in Indonesia is very crucial; therefore, general practitioners and specialists are very important.^{19,20} Another study found that the role of local government is very important in the distribution and distribution of health workers.²¹ The implementation of this political commitment has been proven in several countries.²² In overcoming the disparity of health workers, the Indonesian government took the initiative in the form of providing special incentives to specialist doctors starting in early 2017 and the Mandatory Work of Specialist Doctors program as stipulated in Presidential Decree No. 4 of 2017 concerning the Mandatory Work of Specialist Doctors.

3) Money

"... Financing in HD installations following claims submitted to BPJS Kesehatan. There is a special fund for promotional and preventive activities in the hospital, but, once a year, we hold "World Kidney Day," one of

the activities of which is counseling..." (Informant 1)

"... There is no special allocation of funds for promotional activities..." (Informant 2)

BPJS Health covers the treatment of kidney failure patients as long as the participants fulfill all their obligations. There is a need to study and improve budget sources, both in terms of tariffs, the length of time for disbursement of service contribution funds, and cooperation agreements between the Organizing and Implementing Agencies.²³

The health financing expense illustrates that the PBP group absorbs costs of 29% of the total expenditure or 16.678 trillion rupiahs compared to the non-PBP group with cost absorption of 71% or 40.405 trillion rupiahs. The imbalance occurs because the PBP group is generally dominated by those who have a high risk of disease, especially chronic pain and kidney failure.^{15,24-26} This means that the guarantee can protect everyone in all health conditions.^{27,28} Non-PBP participants also dominated claims for services in FKRTL, with an increase of 56.88% from 2014 (6,208,519) to 2015 (9,740,034). The increase in service users from the PBP group only reached 28.59%, from 2.9 million people in 2014 to 3.78 million people in 2015.

4) Method

"...The treatment procedure for BPJS patients takes longer than general patients, because they have to start from a level 1 health facility and are determined by a kidney consultant, but, since the pandemic period, referrals have been extended in hospitals without the need to go to level 1 facilities..." (Informant 1)

"...The flow of services for hemodialysis patients is by the service flow that applies at Ulin Hospital (flow chart attached)..." (Informant 2)

"... most of the patients are old patients, so better understand the flow, and there are no problems..." (Informant 3)

The bureaucratic structure can make it easier for staff and patients seeking treatment to find out program service procedures. BPJS Kesehatan develops a system to simplify hemodialysis procedures through the use of a fingerprint system for hemodialysis patients. BPJS Kesehatan abolished the procedure for re-referral letters for patients with chronic kidney failure to receive hemodialysis or dialysis services. Instead, patients simply register and record their fingerprints at the designated hospital or clinic.

5) Machines and Materials

"...Ulin Hospital is a Class A Hospital which is a referral centre for patients from South Kalimantan, Central Kalimantan, and East Kalimantan so that it has adequate facilities and so there are no significant obstacles related to machinery or equipment..." (Informant 1)

"...The facilities and facilities at the HD installation are adequate. In the past, tools and medicines were vacant, but now those problems are gone..." (Informant 2)

Machines and materials that must be in the HD installation are HD machines according to standards, routine active machine disinfection, external and internal disinfection, SPO/IK always near the machine, and machine calibration every six months. The equipment is also available in sufficient quantities and is suitable for use (29). BPJS Health guarantees the quality of the facilities in the hemodialysis installation. At the hemodialysis installation of Ulin Hospital, the mechanical and material elements are very good because this hospital is a Class A Hospital, which is a referral center for patients, so there are no significant obstacles related to machines or equipment.

6) Information

"...The information system at Ulin Hospital is available, but information such as the use of internet media, leaflets, banners, brochures, etc. in HD installations is still not available..." (Informant 1)

"...There is an information board, but it has not been accompanied by updated and adequate information..." (Informant 2)

"...There is but not optimal..." (Informant 3)

Data, information, and health indicators are needed that are managed in the health information system to support the implementation of the JKN-KIS program. If the information is inadequate, it will hinder the achievement of goals, for example, Kuswinarti and Sunjaya (2016) state that delays in the information that often occur results in that medicines that have been given to patients cannot be claimed and cause pharmacy losses due to the absence of supporting examinations; this is what happened to pharmacies which resulted in the termination of cooperation with BPJS because they suffered considerable losses.^{30,31} Effective communication, friendliness, and care of staff in serving patients and queue speed increase patient satisfaction.^{32,33}

7) Process Aspect

"...The implementation of health services for BPJS Kesehatan participants in HD Installations all follow the SOPs that have been set by the hospital management and BPJS Kesehatan..."

"...The difference between BPJS patients, both PBI and Non-PBI, is only limited to the management of documents..." (Informant 2)

"...The service processes for patients from registration to dialysis all refer to the applicable SOP..." (Informant 3)

HD Installation Management of Ulin Hospital Banjarmasin refers to the operational policies set by BPJS Health.

The process in the management function, according to Terry (cited in Hasibuan, 2014), includes planning, organizing, implementing, and supervising.³⁴ Services that are medical and non-medical are elements of a process.³⁵ Informants R2 and R3 also revealed the same thing where, in the management process for JKN-KIS patients in HD installations, all of them refer to the SOPs that have been set by BPJS Health.

8) Output Aspect

"...The percentage of HD patients twice a week with URR 65% only reaches 30% because it depends on the patient's adherence to their treatment..." (Informant 1)

"...Patients are 100% regular on hemodialysis, but the percentage of URR 65% is not ideal..." (Informant 2)

To achieve a URR percentage of 65%, the patient must comply with all treatment processes; it can also be concluded that the more often the patient receives dialysis, the better the percentage of the patient's URR.

The output of this study was the number of patients who received services at the hemodialysis installation. An increase from 2018 to 2020, reaching 5528 patients in 2018 and 5614 in 2019; however, the number of patients decreased slightly in 2020, reaching 5059 due to the conditions of the ongoing pandemic. The next output in this study is the achievement of the percentage of URR in patients with kidney failure. Information from informant R2 obtained that the patient's compliance in undergoing hemodialysis 2x a week was 100%. However, the percentage of URR 65% HD patients treated twice per week was only 30% because success is contingent not only on hemodialysis compliance but also on patient discipline and diet; Additionally, it is

possible to conclude that the higher the percentage of a patient's URR, the more frequently they receive dialysis.

9) Obstacles and Suggestions

"...There are frequent system changes where I feel it is too fast without any socialization and a trial period. I hope BPJS Health and hospital management can coordinate to socialize and give us more time to understand the new policy so that we can explain it to the patient's family..." (Informant 3)

10) Benefits of the JKN-KIS Program

"...dispelled my doubts lost due to the existence of a comprehensive financing guarantee..." (Informant 4)

"... BPJS Kesehatan is very useful; hospitalization, medicines, and control (check-ups) get reduced costs and even free of charge because in the previous hospital, there were some medicines that were not covered by BPJS Kesehatan..." (Informant 5)

"...Very helpful/helpful, free check-ups such as blood checks, etc..." (Informant 6)

"...Very helpful/helpful, hospitalization, medicines, etc., free of charge..." (Informant 7)

"...Assisted by BPJS Kesehatan, the service is good and safe. I can't imagine if my treatment is not assisted by BPJS Kesehatan..." (Informant 9)

11) Information obtained about the rights and obligations of hemodialysis patients in the JKN-KIS program

Informants get information through media such as posters, brochures, leaflets, etc., during treatment at hemodialysis installations, brochures, leaflets, etc.

12) JKN-KIS Program Procedures and Mechanisms

"...The procedure is the same; there is no difference between general or BPJS..." (Informant 4)

"...The registration procedure is following hospital regulations, where previously we had to get a referral first..." (Informant 5)

"...The procedure is quite long (a lot), but because I'm used to it, there's no problem because I already know. From the registration procedure to the action, everything is following the SOP..." (Informant 6)

"...The BPJS service procedure is indeed a longer course when compared to general patients, but so far, it can still be followed, and there are no problems..." (Informant 8)

13) JKN-KIS Program to Relieve Patient Expenditure

"...It is very helpful because I know how much it will cost me if I don't use BPJS Health, and I will not be able to pay for this treatment..." (Informant 4)

"...Very helpful, but for certain laboratory results, they are at their own expense..." (Informant 5)

"...Helps, but there are certain drugs that are not covered by BPJS, but the rest there are no significant problems..." (Informant 6)

"...Helps, but expenses are still there..." (Informant 7)

"...Helps, but at the beginning of BPJS registration, a lot of money was spent, buying certain medicines and vitamins yourself..." (Informant 8)

"...Very helpful and not difficult..." (Informant 9)

All informants felt that BPJS Kesehatan was very helpful in terms of reducing their expenses. Since the beginning, BPJS Kesehatan has brought relief to the community through treatment. BPJS Kesehatan is here to address public concerns about payments, especially for the underprivileged.

14) Membership

Five of the six patient informants were non-PBI JKN-KIS participants, and only one informant, namely R4, was a PBI participant, although initially, he had also been a Non-PBI participant for six years. This change occurred because the informant acknowledged that there were financial limitations. Some of the patient informants had a fairly long membership period, namely seven years for informants R4, R5, and R6. In comparison, some of them were still classified as having a new membership period of 1-3 years.

15) JKN-KIS Benefits, Information, and Procedures

The benefit of the JKN-KIS program is to reduce personal expenses for treatment where all patients admit that they will not be able to pay for their treatment for kidney failure, especially HD therapy. The benefits obtained by patients start from the responsiveness of health workers such as doctors and nurses as well as satisfaction with health facilities. The results of the 2019 Swa Business Digest survey stated that respondents' satisfaction with health facilities increased by 2.9% from 2016 (76.2%) to 2019 (79.1%). Meanwhile, Advanced Level Referral Health Facilities (FKRTL) increased from 86.8% in 2018 to 90.4% in 2019. Both from the outpatient and inpatient aspects,

participant satisfaction in the hospital experienced a significant increase. This means that BPJS Kesehatan partner health facilities prove their commitment to continuously improve and improve the quality of services for JKN-KIS participants. Improving the quality of service to BPJS Indonesia participants will indirectly increase patient satisfaction, especially in the hemodialysis installation of Ulin Hospital and patient expectations and patient trust, and increase the hospital's branding image.

16) JKN-KIS Program and Patient Expenditure Burden

All informants agreed that the presence of the JKN-KIS program had eliminated their doubts and fears about the level of costs that would be incurred for the treatment of kidney failure, especially on hemodialysis therapy. Patients are satisfied with the JKN-KIS program; they say there are no additional costs (cost-sharing) during treatment except for personal expenses such as consumption, accommodation, transportation, and others. The results of this study are in line with research conducted by Setianingsih (2016) regarding patient satisfaction using BPJS health at the Pandan Arang Hospital Boyolali, which stated that most (63.5%) respondents were satisfied with the quality of nursing services at Pandan Arang Hospital Boyolali.³⁶

2. Quantitative Analysis

After obtaining information qualitatively from informants, the researcher proceeded with a quantitative analysis based on the data that had been collected. Results can be seen in table 2.

TABLE 2. PATIENT SATISFACTION LEVELS BASED ON SERVQUAL

Dimensions of Health Service Quality	Average Score of Expectations Level	Weighted Factor (WF)	Reality Level Average Score	Weighted Score (WS)	Customer Satisfaction Index (CSI)
Reliability	4.86	20.28	3.96	0.80	79.2
Responsiveness	4.92	20.56	3.81	0.78	76.2
Assurance	4.86	20.28	4.49	0.91	89.8
Tangible	4.59	19.16	4.06	0.78	81.4
Empathy	4.72	19.71	3.70	0.73	74.5
Total	23.95	100	20.01		
Weighted Total (WT)				4.01	
Customer Satisfaction Index (CSI)					80.,2

In Table 2 above, it can be seen that the dimension that gets the highest value is the assurance (89.8%) and the lowest is the empathy dimension (74.5%). The assessment obtained by the CSI method to see the level

of satisfaction of JKN-KIS kidney failure patients with health services at Ulin Banjarmasin Hospital, when combined with the five dimensions, is 80.2, which means that they are very satisfied.

TABLE 3. UNIVARIATE ANALYSIS

Variable	Good Perception		Poor Perception		Total	
	n	%	N	%	N	%
Perceived Benefit	36	85.7	6	14.3	42	100
Perceived Barrier	24	57.1	18	42.9	42	100

Univariate analysis can be seen in Table 3. Most respondents had a good perception of

perceived benefit (85.7%) and perceived barrier (57.1%).

TABLE 4. BIVARIATE ANALYSIS

Variable		Satisfaction				Total		p-value
		Unsatisfied		Satisfied		N	%	
		n	%	n	%			
Perceived Benefit	Poor Perception	6	100	0	0	6	100	0,000
	Good Perception	4	11.1	32	88.9	36	100	
	Total	10	23.8	34	76.2	42	100	
Perceived Barrier	Poor Perception	8	44.4	10	55.6	18	100	0,010
	Good Perception	2	8.3	22	91.7	24	100	
	Total	10	23.8	34	76.2	42	100	

Bivariate analysis at Table 4 shows that there were six (6) respondents (14.3%) who had less perception of the dissatisfied category and 36 respondents (85.7%) who had a good perception of the satisfied category. On the perceived barrier variable, most respondents had a good perception (57.1%) with the satisfied category. Respondents with poorly perceived barriers were 12 people (28.6%) with a satisfied category.

IV. PERCEIVED BENEFIT AND PERCEIVED BARRIER ANALYSIS WITH SATISFACTION

Most of the respondents were in the satisfied category (76.2%), according to the results of interviews with informants who were kidney failure patients who benefited from the JKN-KIS program. In this section, an analysis carried out with the chi-square test obtained p-value<0.05 results, which means that there

is a relationship between perceived benefit and perceived barrier with satisfaction of JKN-KIS renal failure patients. As many as 85.7% of respondents have good perceived benefits and 57.1% with good perceived barriers . Bivariate analysis showed that respondents with good perceived benefits were 100% satisfied with p-value: 0.000 ($p < 0.05$) and in respondents with good perceived barriers there were 100% of respondents with a category satisfied with p-value: 0.010 ($p < 0.05$). These findings show that satisfaction is influenced by perceived benefits with adjusted OR=9,000 (95%CI: 3,573-22,673) and perceived barriers with adjusted OR=8,800 (95%CI: 1,575-49,162). In their study, Elviera and Siwi found that the perception variable about benefits had a 2.94 times ($p < 0.05$) effect on encouraging people to engage in preventative behaviors (37). According to Martha, Lestari, Zulfa, and Sopamena (2021), barriers are divided into internal and external. Internal barriers are knowledge and a culture of shame, while external barriers are costs, dissatisfaction and busy work (38). This is also consistent with Tiaraningrum's study on the reasons for independent JKN participation in Surakarta City, which found that awareness of the important benefits of health in life influenced as many as 86% of respondents to say they wanted to participate in JKN to ensure their health (39). Additionally, it adheres to the Health Belief Model, in which respondents' behavioral changes are influenced by their belief in either perceived advantages or disadvantages, likewise with the education factor (40). Respondents are likely to be most motivated to participate in the JKN if

they have a favorable perception of the benefits and a negative perception of the obstacles. The discovery of threat perceptions, vulnerability, and high severity, as well as the respondents' successful socialization, will support these changes (41). This disclosure follows the hypothesis of Lewin (cited in Calvin) which expresses that adjustments of an individual's way of behaving are impacted by driving and hindering variables.

There are only human resources, and the availability of information is still not optimal in the input aspect because there is still a lack of personnel in the room, and the use of the JKN mobile application has not been socialized. The HD Installation Management of Ulin Hospital Banjarmasin in the process of managing services for JKN-KIS patients refers to the operational policies determined by BPJS Health. To achieve a URR percentage of 65%, the patient must comply with all treatment processes; it can also be concluded that the more often the patient receives dialysis, the better the percentage of the patient's URR. The JKN KIS program has comprehensive benefits and is very helpful for patients in reducing personal expenses and ensuring the fulfilment of the patient's healthcare needs.

As explained in the background, catastrophic diseases are regarded as one of the factors contributing to BPJS Health's financial deficit due to the rising prevalence of these diseases in Indonesia. Figure 1 shows the costs of health insurance from 2014 to 2019 (attachment 1).

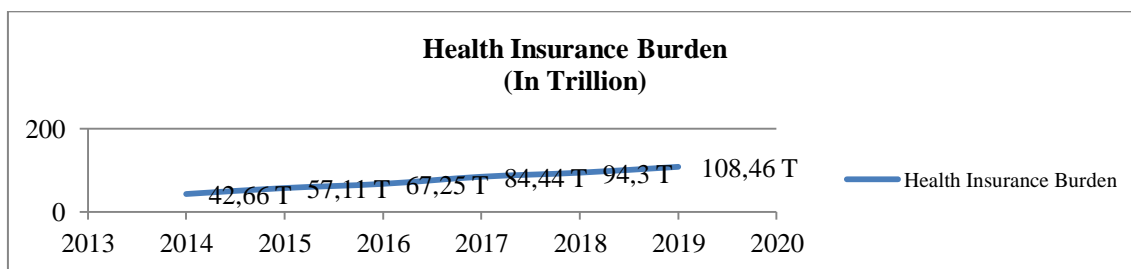


FIGURE 1. HEALTH INSURANCE BURDEN (BPJS HEALTH. NATIONAL PARTICIPATION DATA. 2019) ¹¹

TABLE 5. NUMBER OF CASES AND CATASTROPHIC COSTS *)

Catastrophic	Cases	Costs
Cardiac Disease	13,041,463	10,275,991,842,618
Cancer	2,452,749	3,543,100,599,385
Stroke	2,127,609	2,549,057,628,672
Kidney failure	1,763,518	2,321,341,773,983
Thalassemia	224,886	509,119,118,050
Hemophilia	70,999	405,670,839,460
Leukemia	134,271	361,056,43,870
Liver Cirrhosis	183,531	310,924,725,446
Total	19,999,026	20,276,342,958,484

*) During 2019 (BPJS Health. *National Participation Data*. 2019¹¹)

According to BPJS Health sources, the following eight serious diseases shown in Table 5 pose a significant financial challenge for BPJS Health. The availability of health insurance is advantageous to catastrophic patients. The Alma-Ata Declaration of 1978 in Kazakhstan stated that it was connected with essential medical services as a tool to develop well-being status further. "Promotional, preventive, curative, and rehabilitative services" and "solving health problems at the community level" are the terms used in the statement to describe essential health services.

V. ETHICAL CONSIDERATIONS

Ethics approval for the study was obtained from the Research Ethics Commission of the Ulin Regional General Hospital Banjarmasin (01/I-Reg Research/RSUDU/21). The research in the form of interviews was conducted at the Hemodialysis Installation at Ulin Hospital Banjarmasin in January – May 2021.

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