

DIFFERENCE IN THE EFFECTS OF PREDICTORS FOR ONE-DAY CARE UTILIZATION BETWEEN THALASSEMIA AND CHEMOTHERAPY SERVICES AT ADAM MALIK GENERAL HOSPITAL, MEDAN

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ABSTRACT

Background: One of the innovations for a hospital to compete with others is to offer a one day care. This study aimed to analyze the differences in the effects of hospital status, accessibility, experience, and confidence, on the utilization of one day care between the thalassemia and the chemotherapy services at Haji Adam Malik General Hospital in Medan.

Subjects and Method: This was a cross-sectional study conducted at Haji Adam Malik General Hospital in Medan. A total of 80 patients was selected, consisting of 40 patients who used or did not use the one-day care in the chemotherapy unit and 40 patients who used or did not use the one-day care in the thalassemia unit. The patients were classified as using the one-day care if using it at least three times. The dependent variable was utilization of one-day care either at the thalassemia or chemotherapy unit. The independent variables were hospital status, accessibility, experience, and confidence. Data were analyzed by discriminant analysis.

Results: There was a statistically significant difference in the effects of hospital status ($p < 0.001$) and experience ($p < 0.001$) on the decision to use one day care in the thalassemia unit and the chemotherapy unit. However, there was no statistically significant difference in the effects of accessibility ($p = 0.127$) and confidence ($p = 0.180$) on the decision to use one day care in the thalassemia unit and the chemotherapy unit.

Conclusion: The effects of hospital status and experience on the decision to use the one-day care were significantly different in the thalassemia unit and the chemotherapy unit. But there is no difference in the effects of accessibility and confidence on the decision to use one day care in the thalassemia unit and the chemotherapy unit.

Keywords: utilization of one day care, thalassemia, chemotherapy, discriminant analysis.

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BACKGROUND

One of the hospital innovations to compete with others is to offer one day care. Initially, the one day care product was only in the form of minor surgery, then it developed into chemotherapy services, dialysis (haemodialysis), thalassemia, blood transfusions, ring pairs and others. The rapid development of sophisticated medical techno-

logy allows the implementation of one day care (Wolper, 2011). One day care is able to reduce costs, time, reduce long queues due to limited space and suppress neglected patients, patients are protected from various nosocomial infections that arise from hospitals, thereby increasing patient comfort.

Several hospitals in Medan, North Sumatra, provide similar services (chemotherapy, dialysis/haemodialysis,

ring insertion/catheterization). Reduction of similar services can actually provide benefits to the health care system (Wolper, 2011). This kind of service gives patients the opportunity to choose the one day care chemotherapy product they want to use. But it can also reduce the performance of the health care system. For example, hospitals continue to serve and diagnose patients who are not in accordance with the hospital's capabilities but do not refer patients who should be referred to higher referral hospitals because the facilities and infrastructure do not actually support services to patients. Resulting in an increase in service costs that must be charged to patients/BPJS, especially for cases of chronic disease.

Cancer and thalassemia are non-communicable diseases (PTM). According to Basic Health Research, the prevalence of cancer or oncology increased from 1.4‰ (in 2013) to 1.8‰ (in 2018); The trend of cases of blood disorders/thalassemia in Indonesia increased from 4,896 people in 2012 to 9,028 people in 2018 with the prevalence of thalassemia carriers reaching around 3.8% of the entire population.

RSUP H. Adam Malik is a Teaching Hospital, National Referral (specialist and subspecialty services) and Class A, which is technically under the Directorate of Health Services of the Ministry of Health of the Republic of Indonesia, with the status of a Public Service Agency. Oncology service is one of the superior services at H. Adam Malik Hospital, where in the last five years there have been ups and downs in the trend of visitors to H. Adam Malik Hospital; 7,422 patients (2015), 6,610 patients (2016), 3,786 patients (2017),

4,965 patients (2018), 4,265 patients (2019) and 1,728 patients (January to May 2020) were not directly proportional to the trend of prevalence of oncology (cancer) cases. Chemotherapy services were 1,219 (in 2019) from 4,265 (January to May 2020) the number of oncology patients. Could it be because of the existence of chemotherapy-like services at several hospitals in Medan that made oncology patients choose another hospital, or because of the status of the latest referral hospital, so the patient was not referred or because of the patient's insecurity to take advantage of one-day chemotherapy at H Adam Malik Hospital.

In contrast to the thalassemia service, where the visits of patients with blood disorders increased significantly before and after one day care for thalassemia at H Adam Malik Hospital, from the previous 11 patients to 50 patients. Thalassemia patients usually come repeatedly and the average patient is served in the last three years. The trend of patients increasing by 11 patients per year is 64 patients (in 2017); 79 patients (in 2018); 88 patients (in 2019); and an average of 107 patients (January to June 2020). There are differences in the pattern of visitor trends for the two groups of patients using one day care at H Adam Malik Hospital. This study aims to analyze the differences in the effect of hospital status, accessibility, experience, and self-confidence, on the utilization of one day care between thalassemia sufferers and chemotherapy services at Haji Adam Malik Hospital, Medan.

SUBJECTS AND METHOD

1. Study Design

This study is a cross-sectional study at the Haji Adam Malik Central General Hospital Medan, North Sumatra, carried out from June to December 2020.

2. Population and Sample

A total of 80 patients were selected, consisting of 40 patients using or not using one-day care in the chemotherapy unit and 40 patients using or not using one-day care in the thalassemia unit. Patients were classified as using the one-day treatment if they used it at least three times. The sampling technique was carried out using purposive sampling.

3. Study Variable

The dependent variable is the use of one-day care in both the thalassemia and chemotherapy units. The independent variables are hospital status, accessibility, experience, and beliefs.

4. Operational Definition of Variables

Utilization of one day care is a group of chemotherapy patients and a group of ring plug patients who are users of care in a short (relatively short) period of not more than one day or 24 hours because of the ability of sophisticated medical technology which is the target group to be explained (Permenkes, 2009).

Hospital status is an individual's perception of the position of the hospital in accordance with the real role that the hospital actually carries out in carrying out its functions according to its role (Bruce, 1992).

Accessibility is grouped into three categories, namely: (1) Physical accessibility includes physical access

related to the distance of one day care users which can be calculated from travel time, distance traveled, type of transportation and conditions of one day care; (2) economic accessibility related to the individual's financial ability to access one day care; (3) Social accessibility includes non-physical and financial conditions that influence the decision to go to one day care (Eryando, 2006).

Experience is an event that is caught by the five senses and stored in memory. Experience can be obtained or felt when the event has just happened or has been going on for a long time. The experience that occurs can be given to anyone to use and become a guide and human learning (Notoatmodjo, 2012).

Belief is an individual's behavioral interest which is a function of belief, belief here is a normative belief, in the form of belief that the reference argues for utilizing one day care and motivation to comply with individual interests where behavioral interest will result in individual behavior taking action (Ajzen, 1991).

5. Instrument

The research instrument uses a questionnaire with a Likert scale technique, there are five categories, including: (1) Strongly agree (SS) = score 5; (2) Agree (S) = score 4; (3) Neutral (N) = score 3; (4) Disagree (TS) = score 2; (5) Strongly Disagree (STS) = score 1.

6. Data Analysis

Analysis of the data used is discriminant analysis. The objectives of the discriminant analysis were: to find out whether there was a clear difference between the thalassemia one day care patient group (0) and the chemo-

therapy one day care patient group (1). If there is a difference, to find out the independent variables that make the difference, and make a discriminant function or model.

RESULTS

1. Overview of H Adam Malik Hospital

H Adam Malik Hospital Medan is a general hospital owned by the central government which is technically under the Directorate General of Health Services, Ministry of Health of the Republic of Indonesia. As a Teaching Hospital (Decree of the Minister of Health No: 502/Menkes/SK/IX/1991, dated September 6, 1991), National Referral (basic specialist medical services, medical support specialists, specialist and sub-specialist medical services.), Class A (798 beds) and the management of the Public Service

Agency (KMKNo. 214/KMK.05/2009). Oncology services are the flagship service of H Adam Malik Hospital (PMK. 390, 2014) and since August 2016 H Adam Malik Hospital has started accepting thalassemia patients with one day care that requires two to three days of care. With one day care for thalassemia services are made easier; diagnostic services in clinical laboratories, blood transfusions, iron chelation therapy and other services in less than 24 hours.

2. Oncology and Thalassemia Services at H Adam Malik Hospital

The trend of visitors to oncology and thalassemia patients is different at H. Adam Malik Hospital from 2015 to 2019. Visitors to oncology patients have fluctuated in five years. Meanwhile, visitors to thalassemia patients tend to increase every year (Table 1).

Table 1. Trends of visitors to Oncology and Thalassemia Patients at H Adam Malik Hospital 2015-2019

Year	Chemotherapy	Thalassemia
2015	2121	0
2016	1889	0
2017	1073	64
2018	1419	79
2019	1219	88

Source: SIRS H Adam Malik Hospital in 2020

3. Characteristics of One Day Care Patients at H Adam Malik Hospital

The majority of 80 patients undergoing chemotherapy came from Outside the

City-Madya Medan as many as 24 patients (30%), 31 patients (39%), female and 30 patients (38%) adults (Table 2).

Table 2. Characteristics of the Thalassemia ODC group and the Chemotherapy ODC group

Patient Characteristics	Chemotherapy		Thalassemia	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
Address				
City of Medan	12	15	20	25
Outside the city of Medan	24	30	20	25
Outside of North Sumatera	4	5	0	0
Gender				
Male	9	11.25	13	16.25
Female	31	38.75	27	33.75
Age				
Infant (0-1 year)	0	0	0	0
Kid (2-10 years)	2	2.5	12	15
Adolescent (11-19 years)	1	1.25	11	13.75
Adult (20-60 years)	30	37.5	17	21.25
Elderly (>60 years)	7	8.75	0	0

4. Results of Discriminant Analysis

There was a statistically significant difference in the effect of hospital status ($p < 0.001$) and experience ($p < 0.001$) on the decision to use one-day care in the thalassemia unit and chemotherapy unit. However, there was no statistically

significant difference in the effects of accessibility ($p = 0.127$) and confidence ($p = 0.180$) on the decision to use one-day care in the thalassemia unit and chemotherapy unit (Table 3).

Table 3. Results of Discriminant Analysis of the influence of hospital status, accessibility, experience, and self-confidence, on the use of one day care between thalassemia sufferers and chemotherapy services at Haji Adam Malik Hospital Medan.

Variable	p
Hospital Status	<0.001
Experience	<0.001
Accessibility effect	0.127
Confidence	0.180

DISCUSSION

The results of this study indicate that there are differences in hospital status in the chemotherapy one day care group and the thalassemia one day care group. Hospital status does not automatically make patients make the same decisions in utilizing ODC services in both groups

of ODC chemotherapy users and ODC thalassemia users.

Similar services that are also offered by several hospitals in Medan give patients and families the opportunity to choose a different hospital, but are limited by a tiered referral procedure, where the status of the hospital as a national referral hospital and the last

referral, makes differences between the two groups.

Trust in health services is more influenced by the quality of the doctor-patient relationship (Calnan et al., 2004) compared to hospital status. The doctor's input and advice has more influence on the patient's decision. In fact, most patients do not understand the relationship between hospital status and what the hospital can provide them with. The attitude of choosing is usually related to trust, the status of a hospital does not automatically make someone trust its service products.

There are differences in the experience of ODC in the chemotherapy ODC group and the thalassemia ODC group. Human experience and interaction with the environment is manifested in the form of knowledge, attitudes and actions in choosing and not choosing services. The image of government hospitals is still attached to the hearts of the people with their habits and ways of working that influence decisions in choosing services.

Thalassemia service is a service for disease with lifelong treatment, different from chemotherapy services. In chemotherapy patients, initially because of previous experience or the experience of those around them who gave advice that influenced their decision at the beginning, but because of the need for services and indeed as the final referral of the RSUP. H. Adam Malik was finally chosen to be used as a service option.

There was no difference in ODC accessibility in the chemotherapy ODC group and the thalassemia ODC group. As a national referral government hospital, patients whose entire treatment costs are covered by health insurance,

the distance to the hospital in the two groups is relatively the same and there is no difference. According to the journal analysis of factors related to the use of health services for participants of national health insurance in the work area of the national health center in the work area of the Payakabung Health Center, Ogan Ilir Regency, it was stated that of the four variables that were significantly related to the utilization of health services, one of them was service accessibility. (Irawan, 2018).

There was no difference in belief in the quality of ODC in the chemotherapy ODC group and the thalassemia ODC group. According to the journal Factors of National Health Insurance Participants (JKN) Contribution Assistance Recipients (PBI) related to the utilization of health services in the Mandala Mekar Health Center Work area, Bandung City, there is no significant relationship between belief/trust in health services and the utilization of health services (Ultimate and Inayah, 2020). Because he suffered from a chronic disease and was referred to H Adam Malik Hospital, as the last referral, the two groups using ODC had to use ODC at H Adam Malik Hospital so that there was no difference between the two groups.

This study concludes that there is an effect of hospital status and experience on the decision to use one-day in the thalassemia unit and chemotherapy unit. However, there was no difference in the effect of accessibility and confidence on the decision to use one day care in the thalassemia unit and the chemotherapy unit. The limitation of this research is that it uses a questionnaire instrument so that the answers are

based on the subject's perception, so that there is a possibility of bias or discrepancy with the actual situation and contains an element of subjectivity.

AUTHOR CONTRIBUTION

Destanul Aulia who has helped review the results in this study.

FUNDING AND SPONSORSHIP

This study is self-funded.

ACKNOWLEDGMENT

The author would like to thank Universitas Sumatera Utara.

CONFLICT OF INTEREST

There is no conflict of interest in this study.

REFERENCES

- Ajzen I (1991). The Theory of Planned Behavior, *Organizational Behavior and Human Decision Processes*. 50(2): 179-211
- Bruce J, Cohen (1992). *Sosiologi Suatu Pengantar (Sociology An Introduction)*. Jakarta: PT Rineka Cita 1992
- Calnan M, Rowe R, Entwistle V (2006). Trust relations in health care; an agenda for future research. *J Health Organ Manag*. 20(5): 477-84. DOI: 1011108/14777260610-701830.
- Eryando T (2006). Aksesibilitas kesehatan Maternal di Kabupaten Tangerang (Maternal health accessibility in Tangerang Regency). *Makara, kesehatan*. 11(2): 76-73.
- Irawan Bambang (2018). Analisis faktor-faktor yang berhubungan dengan pemanfaatan pelayanan kesehatan pada peserta jaminan kesehatan nasional di wilayah kerja puskesmas nasional di wilayah kerja puskesmas Payakabung, Kabupaten Ogan Ilir (Analysis of factors related to the utilization of health services for participants of national health insurance in the working area of the national health center in the work area of the Payakabung health center, Ogan Ilir Regency), *Jurnal Ilmu Kesehatan Masyarakat*. 9(3). DOI: <https://doi.org/10.26553/jikm.2018.9.3.189-197>
- Notoatmodjo S (2012). *Promosi Kesehatan dan Perilaku Kesehatan (Health Promotion and Health Behavior)*, edisi revisi 2012 penerbit Rineka Cipta. Hal: 146-149
- Pamungkas G, Inayah NN (2020). Faktor-faktor Peserta Jaminan Kesehatan Nasional (JKN) Penerima Bantuan Iuran (PBI) yang berhubungan dengan Pemanfaatan Pelayanan Kesehatan di Wilayah Kerja Puskesmas Mandala Mekar Kota Bandung (The Factors of Participants in the National Health Insurance (JKN) Recipients of Contribution Assistance (PBI) related to the Utilization of Health Services in the Work Area of the Mandala Mekar Health Center, Bandung City). *Jurnal sehat masada*. 14(4). <https://doi.org/10.38037/jsm.v14i1.125>.
- Kemendes RI. 2009. No: 138/MENKES/PB/I/2009, No: 12 tahun 2009 tentang Pedoman Tarif Pelayanan Kesehatan Bagi Peserta PT Askes (Persero) dan Anggota Keluarganya di Puskesmas, Balai

Kesehatan Masyarakat dan Rumah Sakit Daerah (No: 12 of 2009 concerning Guidelines for Health Service Tariffs for PT Askes (Persero) Participants and Their Family Members at Community Health Centers, Community Health Centers and Regional Hospitals)

Wolper, Lawrence F (2001). Administrasi layanan kesehatan prinsip, praktik, struktur dan penyampaian, edisi kedua (Health care administration principles, practice, structure and delivery, 2nd edition). New York: Buku Kedokteran.