

Web-based Information System of BPJS Patient Referral Letter in UPT Puskesmas Gumuruh

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ABSTRACT

In fact there are still some of factors that for the referral late, as the occurrence of, obstructed labor the difficulty of the decision-making process related to the economic aspect and transportation costs, and the aspect of geographic and availability of infrastructure hospital. This study attempts to analyze the supporters and the barrier covering input and process in the referral system patients BPJS at UPT Puskesmas Gumuruh. A method of made in this study is the method field, a method of literature and method of development systems which is waterfall. The result showed that the lack of facilities and services at UPT Puskesmas Gumuruh still experienced limited supplies and unsatisfactory. The referral online at health facilities first degree is expected to ease patients to obtain, referral letter there is one problem in registration and making. Therefore, the authors designed a web-based BPJS patient referral letter information system to make it easier for patients to obtain hospital services tailored to competence, distance, and capacity according to patient needs. The puskesmas, health offices and BPJS Health need to work together to disseminate information regarding the referral system and pay attention to the provision of drugs and health facilities to maximize the implementation of the referral system.

Keywords: Information system; a referral letter; BPJS

INTRODUCTION

Badan Penyelenggara Jaminan Sosial (BPJS) implemented an online referral system starting in 2018. This online referral system is a digitalization of the tiered referral process from First Level Health Facilities (FKTP) to make it easier for patients to obtain hospital services tailored to their competence, distance, and capacity according to their needs(Wiyanti, n.d.).

In fact, there are still several factors that cause late referrals, such as the occurrence of childbirth complications, difficulty in making decisions related to economic aspects and transportation costs, as well as geographical aspects and the

availability of hospital infrastructure (Susiloningtyas, 2020). In addition, during the referral, the fact is that the response time for the referral is still felt long by the patient to get service. The inability of the community to queue at the First Level Health Facilities (FKTP) and the complicated puskesmas services make patients go straight to the Advanced Level Health Facilities (FKTL) and cause disease. The high number of referrals is an indication that the referral system at Puskesmas is not yet well implemented so important to conduct a study on the implementation of the referral system by comparing with system guidelines reference from the Regulation of the Minister of Health of the Republic Indonesia Number 1 of 2012 and Guidelines National Referral System (Ratnasari, 2018).

The problems in this study are [1] some of the factors that cause late referrals based on the article "Referral System in Maternal Perinatal Health Services in Indonesia" by Luluk Susiloningtyas and [2] referral numbers in Puskesmas that have not been implemented properly in the article " Analysis of The Implementation of Tiered Referral System for Participant of National Health Security at Primary Health Center X of Surabaya" by Dwi Ratnasari. This study aims to [1] improve quality health services in the article "Referral System in Maternal Perinatal Health Services in Indonesia" by Luluk Susiloningtyas and [2] to see the adjustment of the referral system in the JKN era in puskesmas based on existing laws and policies. based on the article "Analysis of The Implementation of Tiered Referral System for Participant of National Health Security at Primary Health Center X of Surabaya" by Dwi Ratnasari.

The increasing number of patient visits at UPT Puskesmas Gumuruh and the lack of facilities and medicines, as well as the majority of patients being forced to be referred since the free administrations accessible at the puskesmas are of destitute quality and the nearness of illness complications in patients, causing the request for referral letters to extend. The recording and making of referral letters to patients is still done manually and hampers the performance and quality of worker services, making long queues and not conducive in this Covid-19 pandemic era. Subsequently, a referral letter data framework is required to encourage the creation and input of BPJS understanding referral letters.

Based on the results of research at the Gumuruh Health Center UPT which was carried out on April 06 – June 07, 2021, the authors conducted research with the problem of recording and making referral letters to patients which were still done manually and hampered the performance and quality of worker services. Based on these problems, the authors designed a web-based BPJS patient referral letter information system at UPT Puskesmas Gumuruh with the benefit of improving service quality and performance at UPT Puskesmas Gumuruh.

METHOD

This research was conducted by collecting data first. There are three types of methods in data collection, namely field methods, library methods and systems development methods. The field method is carried out by observing directly to the research site and conducting interviews to obtain the required data, while the library method is carried out by collecting supporting theories related to the design of a referral letter information system(Sugianto, 2018).

In the system development method, the author uses the waterfall model. This method uses several factors which include:

- 1) Requirements,
- 2) Design,
- 3) Implementation,
- 4) Testing,
- 5) Maintenance(Hidayat, n.d.).

RESULTS AND DISCUSSION

The following will describe the flow of BPJS (Badan Penyelenggara Jaminan Sosial) referral patients at UPT Puskesmas Gumuruh which is currently running:

- 1) Patients register first at the registration unit at the Puskesmas.
- 2) After registering, the patient will be anamnesis by the nurse and examined by the doctor.
- 3) If it is possible for the patient to be referred, then the doctor asks which hospital the patient would like to be referred to?
- 4) After that the doctor will make a referral letter and sign it.
- 5) After that, the patient will be directed to the service staff to ask for a puskesmas stamp.
- 6) Then, the service staff will write down the identity, diagnosis, no. BPJS, the destination hospital manually and stamp the referral letter.

In the flow above, manual referral letters are made in inputting, and reporting patient referral letters. According to the results of the study, the authors make a design of information systems which will help employee performance.

UseCase Diagram

UseCase diagrams represent a sequence of messages and single actions that exist in the system. The following shows the UseCase diagram of the referral system (Juliarto, n.d.-b).

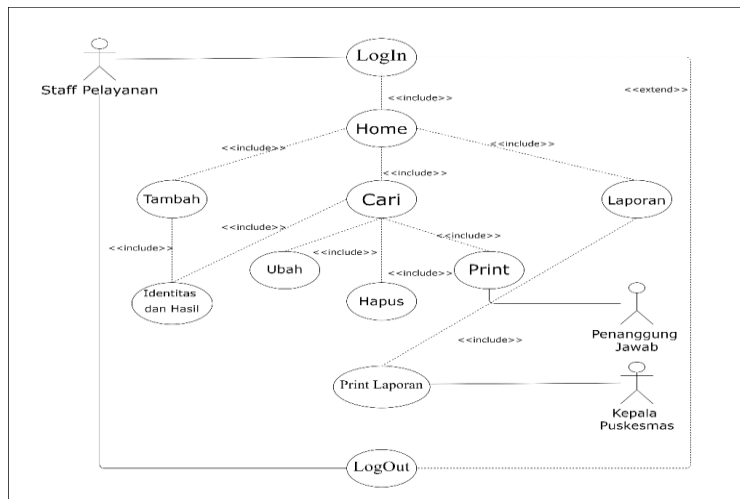


Fig. 1 UseCase Diagram

Activity Diagram

Activity diagrams describe the workflow or activities of a system. The following displays the Activity Diagram of the referral system(Juliarto, n.d.-a).

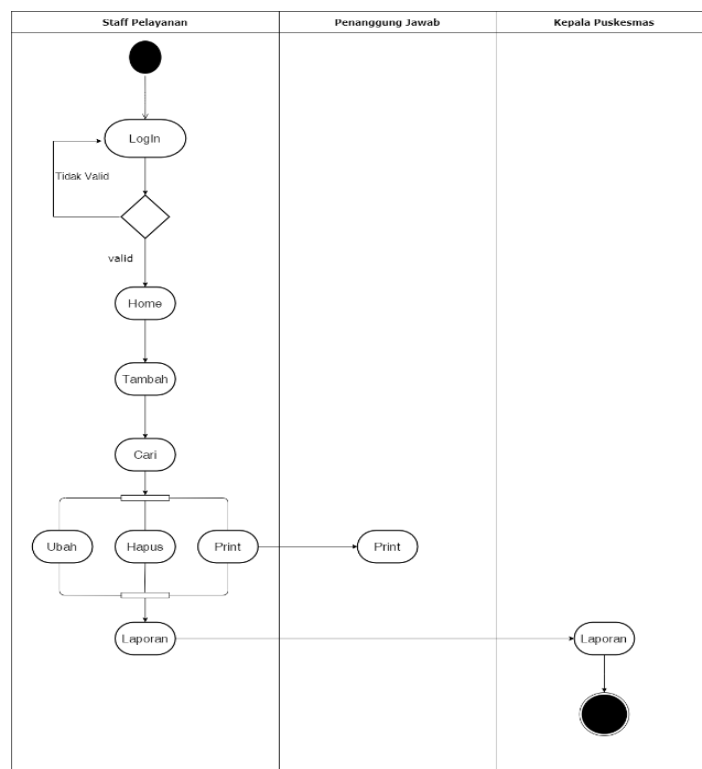


Fig. 2 Activity Diagram

Figure 2 explains where the service staff first logs into the information system using the registered email and password, then the service staff will add the referred patient data. If the patient has asked for a referral letter, the service staff will look for patient data in the search form by searching by name or number. BPJS. If the patient data is complete, the service staff will print a patient referral letter so that the patient can be referred according to the desired installation.

After that, the understanding will give a printed referral letter to the individual in charge to be stamped and inputted, where once a year a report will be given to the Head of the Puskesmas to be given to Dinas Kesehatan.

Database

To design a website, a database is needed to store and help display it on the website. Database design is done using MYSQL and phpmyadmin (Sugianto, 2018). Patient data will be stored in the database, not easily damaged, and facilitate the search for patient data. If there is a change in patient data, then there are rules for carrying out change operations, and delete them (Kadir, 2013). The following is the system database table:

1) User Data Table

Table Name : user

Function : to store user data

Table. 1 user Table Structure

No.	Field Name	Data Type	Field Size	Keterangan
1	Id	Int	11	PRIMARY
2	Username	Varchar	20	
3	Password	Varchar	512	

Source: Author, 2021

2) Patient Data Table

Table Name : patient

Function : to store patient data requesting a referral letter.

Table. 2 patient Table Structure

No.	Field Name	Data Type	Field Size	Keterangan
1	Id	Int	11	PRIMARY
2	Indexs	Varchar	8	
3	jenis_bpjs	Varchar	15	
4	no_bpjs	Char	15	
5	tgl_kunjungan	Date		
6	Nama_pasien	Varchar	100	
7	Alamat	Varchar	100	
8	Rt	Char	3	
9	Rw	Char	3	
10	kelurahan	Varchar	30	
11	kecamatan	Varchar	30	
12	kabupaten	Varchar	30	
13	Provinsi	Varchar	30	
14	kode_pos	Char	6	
15	tgl_lahir	Date		

16	jenis_kelamin	Varchar	20
17	no_telp	Char	15
18	rs_tujuan	Varchar	30
19	Poli	Varchar	20
20	Diagnosa	Varchar	50

Source: Author, 2021

Implementation

Based on the system design that has been made, an application design will be designed that includes input and output design (Hafizhoh, 2018). The following is the design for the Web-Based BPJS Patient Referral Information System Design (Edicode, n.d.):

1) Login Page View

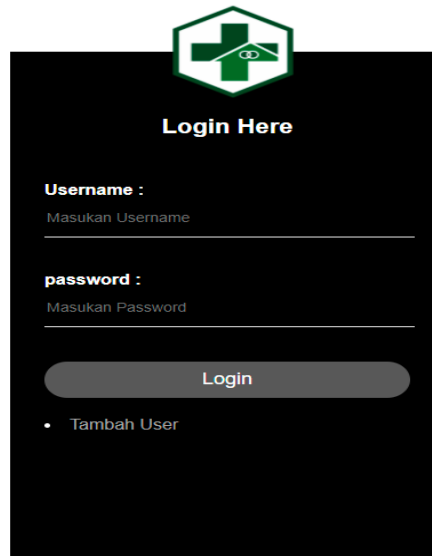


Fig. 3 Login page view

Image 3 is a login page display that is used to enter the referral letter information system page, if the service staff does not have a username and password, the service staff will register first. Once registered press Login.

2) Home Page View



Fig. 4 Home Page View

Image 4 is a Home/Main Menu display that explains the vision and mission of UPT Pusekesmas Gumuruh and explains the request for a referral letter at UPT Puskesmas Gumuruh.

3) Search Page View

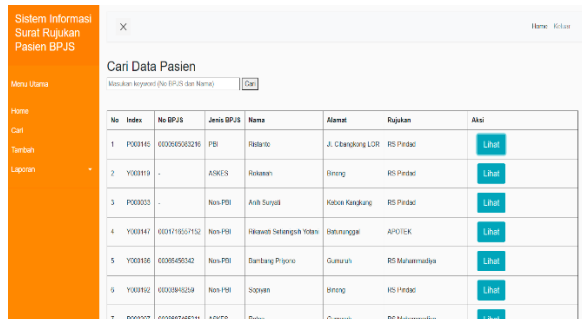


Fig. 5 Search Page View

Image 5 is a display of patient data search that will be referred. Click view, then display the patient data that you want to change, delete, or print.

4) Add Page View

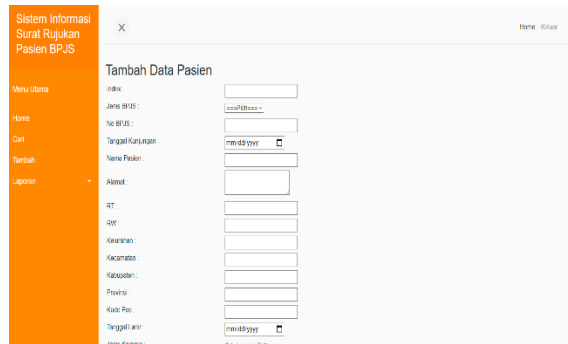


Fig. 6 Add Page View

Image 6 is an added page display, service staff will add patient data to be referred, if the patient is referred for the first time.

5) Report Page View

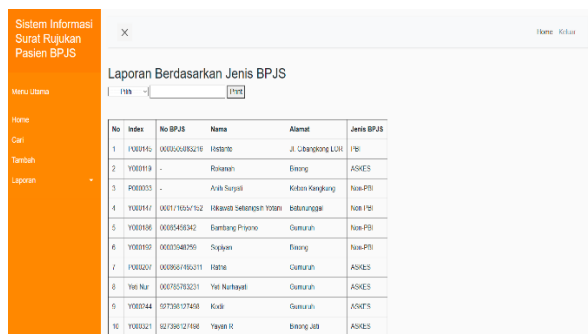


Fig. 7 Report page by type of BPJS

Image 7 is a report page display based on the type of BPJS which is once a year the report will be reported to the Head of the Puskesmas and sent to the center.

6) Report print view

No	Index	No BPJS	Nama	Nomor	Jenis BPJS
1	000001	0000000001	Buzidi	01-Cheung 200	PBI
2	000002	0000000002	Yuliana	01-Cheung 200	PBI
3	000003	0000000003	Yuliana	01-Cheung 200	PBI
4	000004	0000000004	Buzidi	01-Cheung 200	PBI
5	000005	0000000005	Buzidi	01-Cheung 200	PBI

Fig. 8 Request for Referral Letters Based on BPJS Type

7) Print view of referral letters

Fig. 9 BPJS Patient Referral Letter

CONCLUSION

The recording and making of referral letters at UPT Puskesmas Gumuruh is still done physically, in spite of the fact that in 2018 BPJS Kesehatan has executed a web referral framework, but it does not deny that there's a buildup of referral demands at the puskesmas. With the existing problems, the author finally designed a web-based BPJS patient referral letter information system to make it easier for employees to record and make referral letters. The impact of this referral system will accelerate employee performance, so that there is no build-up of referral patient queues at UPT Puskesmas Gumuruh.

With this information system, it is trusted that assist inquire about can grow the subject of talk not as it were as a referral for BPJS patients, but with other safeguard or with diverse issues. And perform database upkeep by continuously updating patient information contained within the information system.

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