Designing The Implementation of Bridging System Between SIMPUS and P-Care to Improve the Validity of Universal Health Coverage Patient Data

Nuryati¹*, Nur Rokhman²

¹,²Vocational College, Universitas Gadjah Mada
nur3yati@ugm.ac.id, nurrokhman@ugm.ac.id

*Corresponding Author
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Abstract: Implementation of the National Health Insurance through the Agency (BPJS) in Puskesmas still experiencing problems were related to membership, double entry system, and limited resources. As an alternative to the solution of some problems that characterize the implementation BPJS Health and as a form of support for the success of Tri Success terms of information technology is the application of the bridging system. The purpose of this study is to analyze the needs of a bridging system between PHC Management Information System (SIMPUS) and P-Care in Puskesmas Gondokusuman 2 Yogyakarta. This type of research is descriptive qualitative case study design. The population of this research subject is SIMPUS users and P-Care with the object of research that SIMPUS implementation stream and P-Care. The results showed that SIMPUS in Puskesmas Gondokusuman 2 consists of several modules, namely registration, inspection, pharmaceutical, daily register, reports, maps of health, reference data and user. In addition, officials are still doing the input of patient data in two different systems, namely SIMPUS and P-Care so that the necessary bridging system to improve the effectiveness and efficiency of patient care at the health center BPJS Gondokusuman 2. Required MoU between the Department of Health with BPJS to get ConsID. Data should bridging ie the data items in SIMPUS covering social data of the patient, the patient's clinical data. then for the data items in Petcare form of referrals, health insurance card number, the type of insured people.

Keywords: BPJS; Bridging; SIMPUS; P-Care

1. Introduction

1.1. Background

Director of Health BPJS, Fahmi Idris, admitted that there are still many problems that characterize the implementation of the Program BPJS during 2014. Such problems include fraudulent practices of a group of people, they will no longer continue to pay dues after completion of health services obtained. Therefore, BPJS Health will improve the program's future [1]. Applications Primary Care (C-Care) owned by BPJS Health and Health Center Management Information System (SIMPUS) owned by the health center are some applications that should be used by health center personnel to manage data on health services provided to participants (patients). The problem of double-entry of data into a problem which was also experienced in the clinic. In addition to impacts on personnel, it also impacts the participants is related to the speed of time queuing.

As an alternative to the solution of some problems that characterize the implementation of the Health BPJS for this and also as a form of support for the success of Tri Success terms of information technology and additional capacity is database improvement that is used and the application of the bridging system for data management participants. This is in accordance with [2], which states that BPJS right to develop the system. Dadang explained bridging function of which speed up queuing system participants and the claim made hospitals and health centers. By bridging system, then the officer does not need to enter (input) data on each of these applications, but it was enough to do one [3].
Some of the problems related to participation BPJS in Yogyakarta and some things that a question of public health center bridging system related problems are as follows. Health BPJS amount of participation in Yogyakarta in August 2014 has reached 2.17554 million people or about 63% of the total population in Yogyakarta. This number will continue to grow along with the integration of the Regional Health Insurance (Jamkesda) to the National Health Insurance program (JKN) Social Security Agency (BPJS) in 2016 the city government [4]. The number of participants in September 2015 reached 2,682,297 people. However, according to data from BPJS Centre until September 2015, the percentage of arrears reached 37%, up significantly compared to the beginning of the year is 21-22%. These arrears occurred in the group of participants independently [5].

While some things that deserve attention because the question of the health center bridging system-related issues based on an evaluation of bridging P-Care with J-Care implemented by BPJS Regional VI in Yogyakarta on Thursday, February 11, 2016 is as follows. 1. The problem of bridging ConsId to gain access to the health center which is ready; 2. Stability issues BPJS web service server; 3. Problems between different verification web service with P-Care; 4. Issue one entry or one that leads to the different mapping of data between the P-Care - J-Care; 5. Problem offline participation, as well as for patients with non-bridging delay referral especially for patients outside of the building; 6. Problems refer behind [6].

The purpose of this study is: Identify the use and measures bridging system between SIMPUS in Puskesmas Gondokusuman 2 Yogyakarta. The scope of the research is limited to service on the registration and clinic for patients in health centers BPJS Gondokusuman 2 Yogyakarta that includes the use SIMPUS groove and P-Care.

2. Related Works/Literature Review

The information system is the process of carrying out the functions, to collect, process, store, analyze, and disseminate information for specific purposes. Efficient and effective delivery of primary care services is an essential component of the success of the integrated system [7]. The most important objective of the health information system is to improve the quality, effectiveness, and efficiency of health care [8]. According to [9] management information system using information technology tools to help people do all the work or services.

According to [10] of human resources is the key reason for which that information systems exist and how they exist. The information system is characterized as a human system because human machine designing information systems and humans also use the information system. Interestingly, the two components of human equality can be troublesome.

According to [10] software refers to the instructions or programs that directly process the data on the computer. There are two primary types of software, namely, operating system software and application software. Consider the operating system software or program instructions that cause the application program to work.

The bridging system is a web-based application service that connects health care system into one. All of this is intended to be able to improve health services in hospitals or health centers, and other health services that receive services JKN [11]. Or bridging systems can be regarded as integrated systems is a process of connecting multiple computerized systems and software applications, both physically and functionally [12].

BPJS develop bridging system, namely the use of IT facilities (web service) that allows two different systems at the same time capable of doing double entry without the intervention of the system on other systems directly. Bridging system aimed at improving the effectiveness and efficiency of data entry processing power while maintaining the security and confidentiality of each system. Moreover, bridging system is expected to improve the speed in claims, receivables, and verification [11].

There are many benefits of development bridging system. For participants BPJS Health, the queue process becomes much faster because participant registration is consistent with the results of [13, 14, 15] which explain that in patient care through BPJS JKN need bridging development system for efficiency. The efficiency obtained with one entry on SIMPUS, the data required P-Care directly saved automatically.
The advantage for the hospitals includes improving administrative services to participants, saving human resources and infrastructure, health services and the data recording process of filing claims become more rapid. In addition, the completion of service based on workload incentive also is more quickly resolved [11]. This is in line with the results of [16] one of the hospitals in the implementation efforts JKN program is doing bridging system.

Early research underlying this research has been done by [17], that the PHC Gondokusuman 2 has been doing data entry on SIMPUS and P-Care, identified other issues related to network connection, the data SIMPUS and P-Care is different, the limited number of human resources as well as their need to deal bridging system delivered on a focused discussion between the heads of health centers, health departments, the government IT city of Yogyakarta. The difference this study with other studies are as follow up of previous studies and conducted in health centers. Implementation of bridging, in general, have been carried out in the hospital, but still limited the steps in preparation for implementation of a bridging system between SIMPUS and P-Care so the service more efficient.

3. Material & Methodology

3.1. Data

This research adjusts to the criteria of the subject required researchers that clerk directly related to data entry into SIMPUS and P-Care, the subjects in this study is registration clerk, clerk general clinic, clerk of poly dental, pharmacist, clerk KIA, and the clerk admin in Puskesmas Gondokusuman 2 Yogyakarta. The object of research is an attribute or the nature or value of people, objects or activities which have a specific variation defined by the researchers to learn and then pulled conclusions [18]. The object of research is examined in this study is related policy implementation bridging systems, appearance and P-Care SIMPUS BPJS, workflow-related data entry after the application of the bridging system contained in Puskesmas Gondokusuman 2 Yogyakarta.

3.2. Method

This type of research is qualitative descriptive. According to [19], descriptive research is research conducted with the main objective to make a picture or a description of a situation objectively. Qualitative research is research that aims to understand the phenomenon of what is experienced by the subject of the study such behavior, perception, motivation, action, and others in a holistic manner by way of description in the form of words and language, in a specific context in which the natural and the using various scientific methods [20]. According to [21], the method of qualitative research is a research method that is based on the philosophy postpositivism, used to examine the condition of natural objects, (as his opponent was an experiment) where the researcher is a key instrument, data collection techniques as triangulation (combined), analysis Data is inductive / qualitative research results further emphasize the significance of the generalization.

The design of the study is examining an issue through a case consisting of a single unit [19]. The case study is a research method that focuses on an intensive and detailed case. The case studies in qualitative research generally aim to maintain the integrity of the object under study. This study researcher focused on the application of the existing bridging system in Puskesmas Gondokusuman 2 Yogyakarta. Subjects in this study that involved several employees at a clinic directly related to the input data on the system and P-Care SIMPUS BPJS. Determination of the sample as a subject of research is done by using purposive sampling technique. According to [22] purposive sampling technique sampling technique that is based on certain considerations made by the researchers themselves, based on the characteristics or properties of the previously known populations.

4. Results and Discussion

4.1. Result

Management information systems puskesmas (SIMPUS) in Puskesmas Gondokusuman 2 is a web-based information system that is built using the PHP programming language and database management system PostgreSQL. SIMPUS consists of several modules that support services in Puskesmas Gondokusuman 2, including Registration, Examination, Pharmaceuticals, admission,
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Reports Health Map Reference Data, and User. SIMPUS Puskesmas Gondokusuman 2 can be accessed by opening a web browser and type the address http://localhost/health centers in the address bar. Then press the enter key, after the login page will appear as follows SIMPUS applications.

Gambar 1. Login page SIMPUS

SIMPUS in Puskesmas Gondokusuman 2 is a web-based information system that is open source so that the program code can be opened and developed itself according to user needs. It takes a system analyst who is experienced in the development of information systems, programmers who understand the programming language PHP and PostgreSQL database administrators who understand to be able to develop this system.

P-Care or Primary Care patient care information system is intended for patients BPJS status (Social Security Agency) computer-based and online via the Internet. This system is used the processing of data from registration, part of the enforcement of diagnosis, therapy, until the examination of a system of information BPJS Online or commonly called P-Care is used in health centers Gondokusuman 2 has the main menu view, namely home, data entry, see the data, tools, and logout. Here's how it looks:

Gambar 2. Menu data entry P-Care
Menu data entry is used to incorporate social data and medical data of patients. The menu consists of 3 submenus that patient registration, patient services, and group activities.

Focus groups Discussion (FGD) between the management of Puskesmas Gondokusuman 2 with the City Health Office and the City Government of Yogyakarta related bridging system on SIMPUS and P-Care. During the discussion on the implementation of agreed bridging system in all puskesmas with pilot projects in Puskesmas Gondokusuman 2. Preparatory steps bridging application include:

1. Implementation of a cooperation agreement between the City Health Office Yogyakarta BPJS to get ConsID to access the web service from BPJS. According to [9], a web service is a software system or application designed for data transmission via the Internet where the user can select and combine through a variety of devices, from personal computers to mobile phones in the interaction between systems on a network. Web service is used as a facility provided by a web site to provide services (in the form of information) to other systems, so that other systems can interact with the system through the services (service) provided by a system that provides a web service.

2. Identification of requirements and specifications to support the system hardware requirements minimal bridging two pentium processor and RAM capacity of at least one Gigabyte, the internet or WiFi network must be fulfilled. According to [10] power supply or hardware that is capable of supplying the power supply voltage is a critical issue, the majority of computer devices connected directly to the power supply. Puskesmas Internet network using the Intranet are from the health department with telecoms provider. But the power used in Puskesmas Gondokusuman 2 Yogyakarta has not been sufficient so that the burden is quite heavy by electrical voltages. This causes the occurrence of a power failure or power is less stable. In addition, the existing Internet network has been unstable or when the loading process takes a long time.

3. Identification data / item on SIMPUS and P-Care will be done bridging:
   a. On the menu entry registration clerk only one in SIMPUS related items address, name, date of birth, patient security numbers for patients who have a security card verification field of membership, and HP number, for patients BPJS the data is sent directly to the P-Care.
   b. On the menu examination, awareness, action / EKG, systole, diastole, heart rate, body temperature, respiratory rate, height, weight, diagnosis, diagnose, medicine, action, tariffs or fees, and the competent authorities , a regular column (regular, mobile phone number, the date of the routine). If the social data mapped these patients BPJS participants, then the data is sent directly to the P-Care.

Parties involved in the application of bridging system that is part of IT in health centers, system developers (developers), and the BPJS. The bridging system itself is made to enable staff to carry out the work to be efficient, easier, and no double entry. The process of checking the validity of the data that goes into P-Care carried out by a health center or IT admin officer in Puskesmas Gondokusuman 2 Yogyakarta. Such data can be checked through P-Care data entered into P-Care adjusted to date and the data has been entered into SIMPUS.

4.2. Discussion

The bridging system was developed to provide solutions to the puskemas officers when entering data into a system. Selection of the best solution requires attention to the most effective solution. Effective here means that the solution can achieve the expected goals [10]. Development of menus in an application associated with the processes and activities within the organization application users. Utilization of the application menu is basically used to facilitate the work and duties of the organization. Utilization of information system applications menu can optimally improve the effectiveness and efficiency of the work, thus impacting also on improving the quality of information of data managed. Optimalisasi use menu allows users to access data faster, more precise, and quality [23, 24].

The results of this research in line with the results of [13-16] which states that the bridging system is one solution for patient care JKN. There are many benefits of development bridging system. For participants BPJS Health, the queue process becomes much faster because of registration and efficiency of service. The efficiency obtained with one entry on SIMPUS, the data required P-Care directly saved automatically. The advantage for the clinic includes improving administrative services.
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to participants, saving human resources and infrastructure, health services and the data recording process of filing claims to be faster. In addition, the completion of service based on workload incentive also is more quickly resolved [11]. This is similar to the results of [16] one of the hospitals in the implementation efforts JKN program is doing bridging system. In addition bridging solution is one steps preparation implementation of electronic health systems, which puskemas anticipate changes in the program that have relevance with information technology [25]. Should the Health Department both regional and national level to apply the policy bridging system between SIMPUS and P-Care. This is in accordance with [26] the use of policies to improve the effectiveness and efficiency of service. In bridging the data entry is done online. Entry data online has the advantage that the data can be recorded in a database that can be updated as soon as the health information exchange. The transaction must include the overall role of the patient as part of the service and the flow of information about the health of the patients [27].

5. Conclusion
Bridging system between SIMPUS and P-Care is one of the solutions to improve the efficiency of patient care JKN / BPJS in Puskesmas. Measures to be prepared in the implementation of bridging is the agreement between the City Health Office Yogyakarta BPJS to get ConsID, data must bridging the data items in SIMPUS covering social data of the patient, the patient's clinical data, then for the data items in the P-Care form of referrals, health insurance card number, the type of insured people. other research are expected to do a security audit-related data on SIMPUS who have made the application of bridging.

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References
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