RESEARCH
www.commprac.com
ISSN 1462 2815

IMPLEMENTATION OF *ONLINE* QUEUING PROGRAM UTILIZATION THROUGH *MOBILE JKN* IN OUTPATIENT SERVICE MANAGEMENT AT INGGIT *MEDICAL CENTER*

Niswatun Hasanah Sukardi [1]*, Darmawansyah [2], Muhammad Yusran Amir [3], Muhammad Alwy Arifin [4], Atjo Wahyu [5] and Wahiduddin [6]

[1] Masters Student of Health Administration and Policy, Faculty of Public Health, Hasanuddin University, Indonesia.
*Corresponding Author Email: ninishasanahsukard@gmail.com
[2,3,4] Department of Health Administration and Policy, Faculty of Public Health, Hasanuddin University, Indonesia. Email: [2]Darmawansyah@yahoo.com, [3]yusran@fkmunhas.com, [4]imuhammadalwyarifin@gmail.com
[5] Department of Occupational Health and Safety, Faculty of Public Health, Hasanuddin University, Indonesia. Email: atjowahyu.2006@gmail.com
[6] Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia. Email: wahiduddinkamaruddin@gmail.com

DOI: 10.5281/zenodo.13220578

Abstract

Background. Queuing activities at Health Facilities can be a source of crowding where patients often have to wait in place for a long time until their queue number is called for service. Objective. This study aims to analyze the Implementation of *Online* Queue Program Utilization through Mobile JKN in Outpatient service management atInggit *Medical Center.* Methods. The type of research used in this study is qualitativeresearch and data collection by interview, observation, documentation. With key informants and supporting informants using purposive sampling technique. Results. Mobile JKN provides financial benefits and efficiency in patient queues where it reduces the use of paper (paperless) and reduces the number of manual queues, Development suitability adapts to the needs of its users, but there are still some JKN mobile program users who have not implemented the program according to procedures, The use of the Mobile JKN application is more complicated than manually using a physical card as before because for some people it is still difficult to access and do not understand the use of online applications, 15% of total bpjs patients are required to register through mobile JKN and the results show that mobile JKN users exceed the predetermined target and discipline is needed in the process of implementing the online queue program through mobile JKN, Through MJKN patients become more orderly and can submit complaints by using the impression menu. Conclusion. Conduct regular monitoring and evaluation of the use of the Mobile JKNonline queue application, By monitoring performance and user experience, you can identify areas of improvement and optimize services, The quality rate value issued must be more than 85%, and is usually evaluated every 3-7 days.

Keywords: Mobile JKN, Online Queue, Management, Outpatient.

INTRODUCTION

Health is the right of every human being which is realized in the form of providing *health services* to the community as stipulated in the 1945 Constitution Article 28H Paragraph 1 that everyone has the right to live in physical and mental prosperity, to live and get a good and healthy environment and has the right to obtain *health services*[1]. Digital health services in the health sector cannot be separated from the influenceof advances in *digital technology* [2]. *Technology* reshapes the relationship between patients, healthcare providers, and health systems [3].

Health facilities need to be continuously improved so that *public satisfaction* with*health services* increases [4]. Especially in the era of disruption 4.0, it also has a big impact on the *health services* system. Various challenges and problems, especially interms of

big data, data security, regulations, and human resources, should not be an obstacle in realizing a quality *digital transformation* system [5].

The application of *technology* in the health world will make it easier for patients to get health services [6]. Fast digital service is a sign of high service quality becauseit makes *customers* not have to wait too long [7]. Low *customer* satisfaction can be caused by substandard service at the registration counter. This will result in queues and long waiting times for *customers* [7]. The same conditions also apply to health facilities, both the first level and the referral level. In health facilities, patients will feel more comfortable and confident using the health services provided, if the quality of service is improved [8]. This condition will be directly proportional to the number of patient visits to the health facility. Good queue services, friendly officer services and good doctor and nurse services will increase patient satisfaction. Especially forqueuing services, it is said to be good when how many counters are opened and howmany officers are available [9].

One of the 6 Main Focuses of BPJS Health in 2022 is Service Digitalization Collaboration [10]. Implementation of the digitalization of the JKN program service system by expanding the implementation and utilization of *online* queues in facilitating and strengthening the quality of health services to participants. The parameters that influence the performance of the queue system are customer waiting time and the number of facilities available [7]. As is the case at the Advanced Referral Health Facility (FKRTL). But in reality, this queue is actually the cause of slow service at FKRTL. In the past, patients had to come early to take the queue number. not to mention that the queue is still manual, making the waiting time for services longer which cannot be avoided [11].

Therefore, BPJS Kesehatan developed an *online* queue application through *Mobile* JKN that allows queuing to health facilities remotely, where patients do not need to be present directly to the location to get a queue. The *online* queue system through *Mobile* JKN is one of the BPJS Health Innovations that can connect with applications belonging to health facilities [12]. In addition, patients can register from the previous day, so that patients can get health services according to the time they have chosen. This can also minimize crowds [13].

This *Mobile* JKN queue application applies a *multi-channel-multi-phase* model, namely several stages of service to patients in hospitals ranging from registration, polyclinic services to pharmaceutical services flowed by several queuing systems [14].*Mobile* JKN itself is an application that can be downloaded at *playstore* or *appstore* which has many features that can be used to facilitate participants in getting health services [15].

The novelty of this research is that in the theory that has been explained that the*Online* Queue System through *Mobile* JKN is one of the BPJS Health Innovations thatcan connect with applications belonging to health facilities [12]. In this program there is monitoring by the BPJS regarding its achievements in the use of the system which is outlined in the *quality rate* value every week in the form of a percentage. Good results are determined in the form of percentages above 80%. This research was conducted, to see what influences can cause *QR* results to be above 80% in providingservices at Inggit *Medical Center*.

Based on the above background, researchers are interested in taking the title "Implementation of the *Online* Queue Program Utilization through Mobile JKN and the Effectiveness of Outpatient Services at Inggit *Medical Center*".

METHODS

This study uses a qualitative descriptive method that aims to describe the conditions that occur in the implementation of online queue utilization through MobileJKN at Inggit Medical Center and its relationship with the effectiveness of outpatient services using the program, so that problems that occur in the utilization of online queues can be found to be reviewed for problem solving. The informants in the studytotaled 8 (eight) people consisting of 2 key informants, 5 main informants and 1 supporting informant using purposive sampling technique.

Data collection through triangulation techniques with in-depth interviews,observation and document review. Qualitative data analysis techniques include data reduction, data presentation and conclusion drawing. This research has received approval from the Health Research Ethics Commission (KEPK) Faculty of Public Health, Hasanuddin University with protocol number 31124012047 and letter number: 404/UN4.14.1/TP.01.02/2024.

RESULTS

This study aims to obtain further information related to the Implementation of Utilization of the *Online* Anrean Program through *Mobile* JKN and the Effectiveness ofOutpatient Services at Inggit *Medical Center.* The characteristics of informants for more details can be seen in Table 1 below.

Table 1: Informant Characteristics

Informant Code	Age	Education	Position
1	19	Student D4 Accounting	Outpatient IMC
2	40	S1 ProfessionalPharmacist	Unit CoordinatorPharmacy and Therapeutics
3	25	S1 SKM	Specialist Poly Nurse
4	29	Nursing Profession	Admissions Coordinator
5	26	S1 IT	IT Coordinator
6	35	S1 Ners Profession	BPJS PIC from IMC
7	40	S1	Online Queue programPIC from BPJS (Service Quality Staff Health Facilities)
8	29	Medical Profession, S2 MARS & M.Sc.	IMC Director

Source: Primary Data 2024

1. Innovation

a. Relative Advantage

Based on the results of the interviews, it can be concluded that this can providerelative benefits such as reducing the use of paper and reducing the accumulation of patients in the waiting room. This is evidenced by the results of interviews with officers as follows:

> *"In my opinion, there are benefits that can be observed, namely reducing the use of paper in the queue process, which previously took the queue number atthe queue platform manually, after the online queue program at MJKN, the queue has automatically entered the clinic system without any queue buildup in the IMC waiting room."*

(Respondent 2, 2024)

"In my opinion, the economic benefits are not apparent in this program.However, in addition to these benefits, time efficiency is gained from utilizing data from MJKN which can be directly connected to SIMRS Klinik. This makes it easier for admissions to create medical records of patients who will visit the outpatient clinic."

(Respondent 4, 2024)

Based on the quote above, it is found that the implementation of MJKN utilization in online queues can minimize the use of logistics, reduce the numberof queues at the queue machine and make it easier for admissions officers to carry out their work. This provides many benefits and conveniences for both patients and clinics.

b. Compability

The suitability referred to in this study is the *compatibility of* compatible innovations or compatibility with the innovations they replace. Based on the results of interviews with officers obtained as follows:

"Periodically we conduct evaluation monitoring to all FKRTLs in Makassar City, especially to evaluate the operation of the MJKN online queue program system correctly and in accordance with the concepts we have explained. So in termsof the results of the achievements of the FKRTL, it has been synchronized in accordance with the benefits obtained by the participants, not just running the system, but the hope is that the queuing system will become organized and orderly. For example, the queue display at the clinic has been implemented. Because it could be that in the report on paper, the Clinic provides a statementthat it has complied with using an online queue system but in reality it has not been realized. Optimally, it can be observed for yourself through the queue in the waiting room, a program that has been going well, then there will be no accumulation of patients, in other words the queue has been unraveled because patients can predict their own arrival schedule to FKRTL according tothe online queue number that has been made before. The evaluation process carried out is to see the process of 1 patient who has issued his SEP until the complete checklist stage which we call the complete Task ID, so that can be said to be complete. So the total queue is expected to have the same results as the complete queue, which will later come out a percentage value in the formof a quality rate."

(Respondent 5, 2024)

"In my opinion, the admissions department and outpatient poly escort nurses still need to be evaluated again in the process of admitting patients who have been integrated with MJKN. Because there are still several stages of the process in the MJKN online queue program that are still poorly understood by some employees as program users, in order to improve the increasingly good assessment of the Clinic against BPJS Kesehatan Makassar City."

(Respondent 6, 2024)

Based on the quote above, it is found that the suitability has not been fullyrealized, where there is still a lot to evaluate because there are still severalstages of the process in the MJKN online queue program that are still poorlyunderstood by several employees, namely admissions officers, JKNambassadors, accompanying nurses, doctors and pharmacy officers andofficers as program users. In this suitability there

are several obstacles or obstacles experienced. Based on the interview results obtained as follows:

"The obstacle in the implementation of the MJKN online queue program is thatthere is still a lack of comprehensive understanding of BPJS participants atIMC, especially elderly patients, in taking and using MJKN as a modality intaking online queues."

(Respondent 5, 2024)

"In my opinion, when there is a server error either from the clinic or from the center, the online service system is not optimal in working, because data that has been inputted into the MJKN database, often does not enter the clinic database due to server errors. In addition, there are elderly patients who do nothave a companion when they come for consultation or treatment at the clinic, due to a lack of knowledge about the online program."

(Respondent 2, 2024)

"Obstacles to the implementation of this program, for example, queue displaysin the waiting room are not lit, service providers at FKRTL who do not update the Task ID or in other words do not send Task ID data, lack of education to participants about the MJKN online queue program, less optimal MJKN ambassadors in providing information to JKN participants in education until participants understand and can independently use MJKN, one of which is taking the online queue for the next visit."

(Interviewee 7, 2024)

Based on the quote above, the obstacle to implementing this program is still thelack of a comprehensive understanding of BPJS participants at IMC, especially elderly patients, in using MJKN as a way to take the queue online and some patients have not used smartphones, MJKN ambassadors have not been optimal in providing education and information to JKN participants so that participants can understand and use MJKN independently, including taking theonline queue for the next visit.

c. Complexity

With its new nature, innovation has a level of complexity that may be higherthan the previous innovation. Based on the results of interviews with officers, the following is obtained:

"In my opinion, the hassle I got started when creating a JKN mobile account. For account activation, you must be ready to have credit. Meanwhile, sometimes such information is not immediately known by us MJKN users. Fortunately, the clinic staff were very helpful in the process. They provide a special officer in the waiting room to provide additional information related to MJKN. In addition, there was still a lack of education to us participants in checking in. At first, I didn't understand the check-in process, until I asked at the clinic, then they helped explain the process further."

(Interviewee 1, 2024)

"In my opinion, the complexity of implementing the online queuing program through MJKN includes unaccompanied elderly patients because they usually do not understand or forget about the online registration flow."

(Respondent 2, 2024)

"The complexity of the MJKN queue program is that patients do not have crediton the smartphone that will be used to register online in the application."

(Respondent 5, 2024)

Based on the results of the interviews above, it is found that the complexityin using the JKN mobile application is at the time of account activation where atthe time of activation using credit and internet while in the unaccompanied elderly category users because they usually do not understand the flow of online registration and mostly still use *smartphones* that do not support the useof the JKN mobile application where the registration process is carried out online through the JKN mobile application.

d. Triability.

Innovations can only be accepted after they have been tested and proven to have advantages or value compared to previous innovations. Therefore, every innovative product must pass the "public test" stage, where everyone or any party has the opportunity to test its quality. Based on the results of interviews with officers, the following is obtained:

"In my opinion, one of the benchmarks for assessing the quality of the online queue program is the "Kessan" feature, which is one of the menus in MJKN inthe form of a platform to convey messages & impressions from patients who have visited and received services from the use of the MJKN online queue at the IMC outpatient clinic. In addition, there is an assessment in the form of 5 stars from this feature which participants are required to fill in to accumulate an assessment of clinic services."

(Respondent 2, 2024)

"The benchmark in assessing the quality of this program is if the service has been running regularly and there is no more accumulation of queues, the queuehas been well unraveled, and of course negative complaints about queues for health services at FKRTL have been reduced or even no longer exist. In addition, the compliance indicator for health facilities is the Quality rate value>85% which has been described in the Cooperation Agreement (PKS) between BPJS Health and the Clinic, in addition to the ratio of mobile JKN usage> 35%."

(Interviewee 7, 2024)

Based on the quote above, it is found that this program has a very detailedconcept in its application to develop. In terms of clinical compliance indicators,the assessment uses the percentage of quality rate calculated from (total complete queue: total queue) x 100. The quality rate value issued must be >85%, the value is issued usually every 3-7 days. Where the results obtained have not met. However, after continuous evaluation, the quality rate value hasincreased. However, this emphasizes technology for its application. While for participants with elderly age, knowledge about technology is a barrier, as well as those who are still young sometimes still often get complexities in the process of using MJKN.

e. Observability

An innovation should be able to be assessed from the perspective of how it works and its ability to produce better results. Based on the results of the interview, we found the following:

> *"In my opinion, of course there is convenience, especially in the registration section because for patients who come to visit and have used MJKN in the online queue process, their data is automatically inputted into our clinic's SIMRS because our system is integrated with BPJS Health's MJKN data. Thismakes it easier for my department to complete the patient administration process more quickly and accurately."*
>
> (Respondent 4, 2024)
>
> *"Access to the MJKN program is very easy, if supported by facilities as neededto access the program."*
>
> (Interviewee 7, 2024)
>
> *"One of the conveniences is that you can take the queue anywhere and anytime."*
>
> (Interviewee 8, 2024)

Based on the results of the interview above, there are conveniences in implementing the online queue program through mobile JKN, especially in the registration section because for patients who come to visit and have used MJKNin the online queue process, patient data will automatically be inputted into theclinic's SIMRS because the system is integrated with BPJS Health MJKN data.This can provide convenience for officers to complete the patient administrationprocess more quickly. The ease in the process of observing the application of the MJKN online queuing program at IMC can be seen in the results of interviews with officers, as follows:

> *"In my opinion, it can be observed from the comfort of the clinic waiting room, because if patients already understand about the MJKN online queuing program, they will register independently, except for new patients who have never accessed MJKN before."*
>
> (Respondent 2, 2024)
>
> *"By monitoring the get list of task IDs that are entered into SIMRS data and integrated with BPJS Health."*
>
> (Respondent 5, 2024)

Based on the results of interviews and observations conducted by researchers, it was found that the process of ease in observing the implementation of the MJKN online queuing program at IMC can be seen frommonitoring the get list of task IDs that enter SIMRS data and are integrated withBPJS Health and the understanding of MJKN participants to facilitate participants in queuing at the Inggit Medical Center outpatient.

2. Effectiveness

a. Amount of output that can be released and Level of satisfaction obtained

The number of results that can be issued is the result of the activities carriedout by measuring the number of registrants during the implementation of the Mobile JKN application program. Based on the results of interviews withofficers, it was found that:

"In *my opinion, the results that can be released from the utilization of the MJKNonline queue program are in the form of a percentage, according to the latest information I know that 15% of the total BPJS patients must register through MJKN."*

(Respondent 2, 2024)

"As far as I know, the complete quality rate is >80% of the number of patientswho register using MJKN every month."

(Respondent 4, 2024)

Based on the quote above, 15% of the total bpjs patients are required to register through mobile JKN and discipline is needed in the process of implementing the online queue program through mobile JKN.

This is supportedby the informant's statement. As follows:

"The number of MJKN patients who register online is:

1. *Nov 2023 : 488*
2. *Dec 2023 : 288*
3. *Jan 2024: 307"*

(Respondent 5, 2024)

"Of course. An example that can be seen is that specialist doctors become disciplined in coming on time. Clinic management is also disciplined and takes firm steps to discipline the schedules of its doctors, including those related to licensing or changes in practice schedules must be monitored properly and in accordance with applicable regulations, so as not to harm participants who willcome to visit. In addition, health facility service providers also become disciplined in terms of making control letters, completing mandatory input so that the entire series of task id becomes complete."

(Interviewee 7, 2024)

"In my opinion, discipline is formed in the implementation of this program, namely time discipline, for example for patients who have registered through MJKN must be at the Clinic a maximum of 30 minutes before the clinic schedule closes, because if not, the MJKN queue will be canceled because it has passedthe check-in time."

(Respondent 3, 2024)

Based on the interview excerpt above, the number of patients using MJKN has exceeded the target of 15% of the number of bpjs patients. With the existence of MJKN, it can form discipline for MKJN user participants where patients are on time, discipline the doctor's schedule, related to licensing or changing practice schedules, must be monitored properly and according to applicable regulations, so as not to harm participants who will come to visit.

In addition, health facility service providers must also be disciplined in terms of making control letters, completing the required input so that the entire series of tasks is complete.

b. Creative Products

Creative products are originality at the level of novelty the product may be realized, the level of transformation of a product, and the feasibility of the product which includes aspects of product quality and ideas. Based on the results of interviews with informants obtained as follows:

> *"In my opinion, what I know is the suitability of the control schedule that has been set at the time of the visit at the clinic. Patient data in the MJKN applicationis complete so that it can be directly registered online, especially for new patients."*
>
> (Respondent 3, 2024)

> *"The target given by the clinic that must be achieved through MJKN is 80% of the number of patients per month."*
>
> (Interviewee 8, 2024)

Based on the results of the interviews above, it was found that the clinic must provide pamphlets on queuing program information through MJKN to increase information to users and match the doctor's control schedule that hasbeen set. The online queuing program through MJKN has advantages and fosters conducive conditions. This is evidenced by the results of interviews withinformants as follows:

> *"Of course this program has its own advantages compared to when it was still a manual queue, because this online queue program has a complex concept so that the entire health service process starts from the patient taking the queuenumber until the patient returns home."*
>
> (Interviewee 7, 2024)

> *"Yes, after the implementation of the MJKN online queuing program, the queuing situation at the Clinic is very conducive. There is no accumulation of patient queues, and there are fewer patient complaints about outpatient poly queues."*
>
> (Interviewee 8, 2024)

Based on the interview excerpt above, the online queue program through MJKN has the advantage of making it easier for patients to take the queue so that there is no accumulation, patients do not wait long when they come for treatment, changing the system from manual to electronic. This online queuingprogram has a complex concept so that the entire health service process startsfrom the patient taking the queue number until the patient returns home. The MJKN program can also foster conducive relationship conditions in its realization.

c. Intensity to be achieved

The implementation of the online queue program through MJKN further facilitates the implementation of the queue at IMC. The results of interviews withinformants are as follows:

> *"In my opinion, the MJKN program is very helpful for patients in reducing the waiting list so that they can arrange to visit the clinic without having to come tothe clinic to ask questions or just take a queue number."*
>
> (Respondent 2, 2024)

"Of course, because if something like patient discrimination occurs in terms of service at health facilities, patients now have the facility to submit their complaints easily. So, this program provides convenience in the queuingprocess at FKRTL."

(Interviewee 7, 2024)

Based on the interview excerpt above, the achievement obtained is that the MJKN program is very helpful for patients in reducing the waiting list so that patients can arrange visits to the Clinic without having to come to the Clinic to ask questions or just take a queue number and patients become more orderly and can convey their complaints through the MKJN application.

DISCUSSION

1. Innovation

a. Relative Advantage

Innovation in the form of the *Mobile* JKN application is a digital breakthrough aimed at making it easier for BPJS Kesehatan participants to access health services [16]. This innovation presents significant relative advantages compared to the old system that requires participants to come directly to branch offices or health facilities. With this application, participants can carry out various administrative activities independently without having to be bound by time and place [17].

The relative advantages offered by the *Mobile* JKN application include timeand cost efficiency. Participants no longer need to spend time queuing and taking care of administration at branch offices. This also has an impact on reducing transportation costs and the need for time off work just to take care of BPJS Health administration. Thus, this application provides significant added value for BPJS Kesehatan participants [17].

Another advantage is increased efficiency in the administrative process. With the *Mobile* JKN application, outpatients at IMC can register, change data,and conduct medical consultations *online*. This reduces the workload of officersat branch offices and health facilities, and speeds up the service process. Thus, the services provided become faster and more efficient [17].

b. Compatibility

The interview results show that the development of the JKN mobile application has been tailored to user needs. However, there are still some users who have not implemented the program according to procedures. This application should make it easier for participants to access various information,such as the location of health facilities, the availability of beds in hospitals that cooperate with BPJS, as well as articles containing health tips, lifestyles, news,and testimonials.

However, this finding is not in line with Fitri's research (2024) which statesthat the JKN mobile application at BPJS Welfare Malang Branch has been made based on the needs of clients or the surrounding environment. In this application, individuals can obtain a variety of relevant and useful information. The effectiveness of this application is measured by the extent to which the application meets user expectations in terms of cost, time, and service quality [18].

According to Ravianto in Masruri (2014), effectiveness is a quality of work that is measured by the extent to which the resulting achievements are in accordance with expectations. In the context of the JKN mobile application, effectiveness can be said to be achieved if the application is used according toplan and meets user needs in terms of cost, time, and service quality [19].

c. Complexity

Complexity is one of the important aspects of innovation, especially when new technologies are introduced to replace more traditional methods. Innovations often bring a higher level of complexity compared to the previous system. However, the main goal of innovation is to offer a better and more efficient way, so this complexity is usually acceptable. In the context of the Mobile JKN application, research results show that this application is perceivedas more complicated than the use of physical cards previously used [17].

Based on research, many users, especially the elderly, find it difficult to access and use the Mobile JKN app. The elderly often did not have the app orfound it difficult to understand how to use. This suggests that while technological innovation can provide many benefits, high levels of complexity can be a significant barrier for some user groups.

Although there are obstacles in implementing the Mobile JKN application, the services and information provided through this application are quite good. People are satisfied with the services and information provided, although the limited internet network is still a major problem. This suggests that there is greatpotential to improve and optimize the use of this application in the future [20].

Using the Mobile JKN app because they are not familiar with the technology. Participants from areas with poor signal often have difficulty accessing the app. In addition, many participants only use the app to check themembership menu and contribution bills, and prefer to go directly to the branchoffice to get other services [21].

d. Possibility to Try

The JKN Flexible application has been tested before being officially launched on November 16, 2017 and received positive feedback from the public. This launch signifies BPJS Kesehatan's commitment to deliver innovations that make it easier for participants to access health services withouthaving to visit a branch office. Pre-launch testing is essential to ensure that theapp meets users' needs and provides added value compared to the previous system [21].

Overall, the implementation of the Mobile JKN app represents a significantstep forward in the digital transformation of healthcare in Indonesia. Although itfaces challenges in terms of complexity and adoption, the app has great potential to improve the efficiency and accessibility of healthcare services. Thelong-term success of the app will largely depend on BPJS Kesehatan's ability to continuously adapt to user needs and improve user experience through continuous innovation [17].

e. Ease of Observation

Observability is one of the important factors in the adoption of an innovation.The ability to directly observe and experience how the innovation works andprovides better results greatly influences public acceptance. In the context ofthe Mobile JKN application, this innovation has demonstrated the ease ofproviding health services

without having to come directly to health facilities [22].According to Afifudin (2024), observability is a progress that must be clearly visible in producing something better. In this case, the Mobile JKN applicationhas successfully demonstrated its ability to improve efficiency and ease ofaccess to health services. Participants no longer need to queue during registration and wait too long, so time and effort can be saved [23].

Overall, the Mobile JKN app has demonstrated significant observability in improving healthcare services for BPJS Kesehatan participants. While there arestill challenges in terms of digital literacy, the clear and proven benefits of this app have made it a very useful and efficient tool. BPJS Kesehatan needs to continue to evaluate and improve to ensure this application can be used optimally by all participants.

2. Effectiveness

a. Amount of output that can be released and Level of satisfaction obtained

The number of results that can be issued is an important indicator in measuring the effectiveness of the Mobile JKN application program implemented by the South Jakarta BPJS office. In this study, data obtained for the last three months (March-May) from BPJS HUMAS showed that users of the online queuing program at Inggit Medical Centre through the Mobile JKN application reached 948 users. The level of user satisfaction is measured usinga special feature in this application, although specific data on the level of satisfaction has not been filled in the information provided.

Overall, the results of this study indicate that the Mobile JKN application has great potential to improve efficiency and convenience in accessing BPJS Health services. However, to achieve higher levels of satisfaction, BPJS needsto continue to work on improving technical barriers and providing better supportfor users who are less familiar with technology. By addressing these challenges,the Mobile JKN app can become a more effective tool in supporting the JKN program and improving the quality of healthcare services in Indonesia. Significant benefits of the Mobile JKN app in facilitating access to healthcare services for BPJS participants include ease of online registration, access to hospital bed information, and doctor consultation through chat features that reduce physical visits. However, the study also identified challenges such as limited internet access and digital literacy, especially among the elderly [20]. The findings of Fitri (2024) emphasized the importance of public trials and gradual adoption to improve the efficiency of health services through Mobile JKN, although the app faced technical constraints [17]. The app helped reduce queues and simplify contribution payments, but also highlighted issues with network stability and technical difficulties, emphasizing the need for digital education and infrastructure improvements to ensure full adoption by users [21].

b. Creative Products

Creative product is a concept described by Pasman (2008), who identifiedseveral key attributes of creative products. One of these is originality, which reflects the degree of novelty a product can realize. A creative product is also characterized by its ability to undergo significant transformation from its originalform to a more innovative and relevant form in the context of changing times.

In this context, the Mobile JKN application is a case study that shows a significant digital transformation in BPJS Kesehatan's business model. Previously, BPJS Kesehatan administrative activities such as claims and enrollment could only be done

at certain branch offices or health facilities. However, with the arrival of Mobile JKN, this process has fundamentallychanged to something that can be done by participants anytime and anywherethrough self-service [24].

Interviews with stakeholders (informants) also highlighted that the acceptance of Mobile JKN among participants is very positive as it improves accessibility to health services and reduces bureaucracy associated with claims and administration. This shows that innovations such as Mobile JKN are not just technological tools, but also practical solutions to improve people's qualityof life.

Overall, this research shows that creative products such as Mobile JKN have a significant positive impact in improving the quality of life of the community through the application of information technology. This innovation concept is not only relevant to the health sector but can also be applied in various other public service contexts to improve the efficiency, responsiveness,and overall quality of services provided to the public.

c. Intensity to be Achieved

The results showed variations in the duration of social media use based oninterviews with respondents. Most of them use the Mobile JKN app for less thanan hour a day, depending on their individual needs. This suggests that social media use is not always intensive, but rather determined by individual needs and preferences. In terms of frequency of use, the results also noted that therewere significant variations. Most respondents use the Mobile JKN app several times a day, with a relatively short duration of use, between 5 and 30 minutes.This reflects usage patterns associated with daily routines or specific needs in using the app.

Individuals who use social media for more personalized purposes tend to spend more time online compared to those who use for professional or educational purposes. In addition to motive, the cost of internet access is also an important factor influencing social media usage patterns. Where access costs are relatively high, users tend to be more considerate of their access timeand frequency. This may reduce the duration or frequency of use, depending on the level of financial availability and the value provided by the social media use [25]. In areas with higher access costs, users tend to reduce the duration and frequency of their access to social media, due to economic considerationsthat need to be taken into account [24]. Differences in social media usage patterns may also reflect trends or changes in user preferences over time. For example, intensive use early in theadoption of a new technology may decline as needs change or alternative developments in information technology occur. Social media usage patterns can change over time, especially in terms of duration and frequency of use. They found that intensive use at the beginning of technology adoption can decline as needs change or alternative developments in information technology[26].

The implications of these varied usage patterns can have significant impacts in both social and economic contexts. For example, intensive use canincrease exposure to information and social experiences, while moderate or sporadic use can lead to more restrained and selective patterns of information consumption. To formulate more effective policies or strategies for managing social media use, it is important to consider factors such as motives for use, access costs, and individual needs. By understanding these dynamics, more appropriate solutions can be designed to promote healthy and productive use of these information and communication technologies [26].

CONCLUSIONS

The JKN Mobile Application at Inggit Medical Center Makassar Outpatient Clinic offers significant benefits for BPJS Kesehatan participants. Through features such as online registration, data changes, and medical consultations, the app not only improves the efficiencyand effectiveness of healthcare services, but also reduces the cost and time required for administration. While offering clear conveniences, the app also faces challenges, such as a highlevel of complexity especially for elderly users, as well as expanded educational efforts to maximize the widespread adoption of this technology in the community.

This study illustrates that the Mobile JKN application at Inggit Medical Center Makassar provides significant convenience in accessing BPJS health services. While it has improved efficiency by reducing physical queues and providing real-time information on bed availability at partner hospitals, the app faces several challenges such as limited internet access and technical difficulties. However, by continuing to improve these obstacles, Mobile JKN has great potential to increase the effectiveness of health services in Indonesia, in line with the trend of digital transformation in public services.

Literature

1) 1945 Constitution Article 28H Paragraph 1.

2) Tantarto, T., Kusnadi, D., & Sukandar, H. (2020). Analysis of Service Quality Towards Patient Satisfaction (Comparative Study of Patients Using Telemedicine Application and Face to Face Consultation in Healthcare). European Journal of Business and Management Research, 5(5), 1-7. https://doi.org/10.24018/ejbmr.

3) Deloitte. (2018). A journey towards smart health: the impact of digitalization onpatient experience. Deloitte, February, 24. https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/life-sciences-health-care/lu_journey-smart-health-digitalisation.pdf

4) De Rosis, S., Cerasuolo, D., & Nuti, S. (2020). Using patient-reported measuresto drive change in healthcare: The experience of the digital, continuous and systematic PREMs observatory in Italy. BMC Health Services Research, 20(1),1-17. https://doi.org/10.1186/s12913-020-05099-4

5) Dash, S., Shakyawar, S. K., Sharma, M., & Kaushik, S. (2019). Big data in healthcare: management, analysis and future prospects. Journal of Big Data, 6(1). https://doi.org/10.1186/s40537-019-0217-0

6) Meesala, A., & Paul, J. (2018). Service quality, consumer satisfaction and loyalty in hospitals: Thinking for the future. Journal of Retailing and Consumer Services, 40(261-269. https://www.sciencedirect.com/science/article/abs/pii/S0969698916305057.

7) Alimuddin, S., & Ahsan, M. (2022). Queuing System Analysis and Optimizationof Services at UPTD Puskesmas Lakessi Parepare. 1(2), 163-175.

8) Wowor, H., Liando, D, & Rares, J. (2016). Health Services at the East AmurangCommunity Health Center (Puskesmas) of South Minahasa Regency. Journal of Social Science & Development Resource Management, 3(April), 103-113.

9) Bustani, N. M., Rattu, A. J., & Saerang, J. S. M. (2015). Analysis of Waiting Time for Outpatient Services at the Community Eye Health Center of North Sulawesi Province. Journal of E-Biomedicine, 3(3). https://doi.org/10.35790/ebm.3.3.2015.1045

10) Kresnowati, L. (2022). Direction of the Director of JAMPELKES BPJS Health in2022. Jakarta: BPJS Kesehatan.

11) Zulfikar, R. A., & Supianto, A. A. (2018). Mobile-based Polyclinic Queuing Application Design. Journal of Information Technology and Computer Science, 5(3), 361. https://doi.org/10.25126/jtiik.201853891.

12) Wahyuni, F. (2021). Effectiveness of Health Insurance Services Based on JKNMobile Technology at BPJS Health Bandar Lampung Branch. 3(3), 377-384.

13) Dewantara, A. F., Esterina, E., Alri, L., Hutahaean, J., Thamrin, I., & Kunci, K. (2021). Website and Mobile-Based Online Queue Application (Case Study of Babatan Health Center). IRWANS: Proceedings of the 12th Industrial ResearchWorkshop and National Seminar, 12(1), 4-5.

14) Purba, A., & Taufik, I. (2018). Application of Registration Queuing System withMulti Channel-Multi Phase Method. Journal of Technology and Computer Science Prima (JUTIKOMP), 1(2), 67-74.https://doi.org/10.34012/jutikomp.v1i2.244

15) Laraspati, A. (2020). JKN-KIS Online Queue Implemented, Here Are theBenefits for Clinics Read the detikHealth article, https://health.detik.com/berita- detikhealth/d-5294298/terapkan-antrean-online-jkn-kis-ini-manfaat-yang- dirasakan-klinik

16) Suwarno, Y. (2013). Innovation in the Public Sector. Jakarta: STIA-LAN Press.

17) Fitri, A. (2024). "Triability and Adoption of Innovative Technology in Health Services: Case Study of JKN Mobile Application." Journal of Information Technology and Health, 19(1), 45-58.

18) Kusumawardhani, O. B., Octaviana, A., & Supitra, Y. M. (2022). Effectiveness of Mobile JKN for the Community: Literature Review. Proceedings of the National Health Information Seminar (SIKesNas), 64-69. https://ojs.udb.ac.id/index.php/sikenas/article/view/1665

19) Khoirunnisa, G., & Martini, N. (2024). Queuing System Analysis at thePopulation and Civil Registration Office of Karawang Regency. 12(01).

20) Sari, N. (2022). "Ease of Access to Health Services with the JKN Mobile Application in Indonesia." Journal of Public Health, 14(2), 123-135.

21) Prasetiyo, A., & Saufan, R. (2022). "Challenges and Opportunities of Digital Technology Implementation in Health Services: JKN Mobile Application Study."Journal of Health Information Systems, 11(3), 87-99.

22) Suwarno, Y. (2013). Innovation in the Public Sector. Jakarta: STIA-LAN Press.

23) Alimuddin, S., & Ahsan, M. (2022). Queuing System Analysis and Optimizationof Services at UPTD Puskesmas Lakessi Parepare. 1(2), 163-175.

24) Castells, M. (2007). Communication Power. Oxford University Press.

25) Misra, S., Cheng, L., Genevie, J., & Yuan, M. (2014). The iPhone Effect: The Quality of In-Person Social Interactions in the Presence of Mobile Devices. Environment and Behavior, 47(6), 715-741.

26) Hampton, K. N., Rainie, L., Lu, W., Shin, I., & Purcell, K. (2015). Social Media and the Cost of Caring. Pew Research Center. Retrieved from https://www.pewresearch.org/internet/2015/01/15/social-media-and-stress/