Research Article

Patterns of Outpatient Referral Cases before and after Implementation of National Health Coverage Program

Pola Kasus Rujukan Rawat Jalan sebelum dan sesudah Pelaksanaan Program Jaminan Kesehatan Nasional

Eka R. Gunardi, Arresta V. Suastika

*Department of Obstetrics and Gynecology
Faculty of Medicine Universitas Indonesia
Dr. Cipto Mangunkusumo General Hospital
Jakarta*

Abstract

Objective: To understand the pattern of referral cases (accuracy of referral diagnosis, the accuracy of referral health facility and consistency of referral diagnosis) in obstetrics and gynaecology outpatient clinic before and after the implementation of JKN.

Methods: This is an observational cross-sectional study using medical records of patients who were referred to obstetrics and gynaecology outpatient clinic in Dr. Cipto Mangunkusumo General Hospital in 2013 and 2014. Data were analyzed with bivariate analysis with chi-square, consisting of the accuracy of referral cases, accuracy of referral health facility, and consistency of referral cases before and after implementation of JKN.

Results: There is a growing number of patients in obstetrics and gynaecology outpatient clinic after the implementation of JKN in 2014, which is 4.311 patients. Subjects were 222 cases, 104 cases from 2013 and 118 cases from 2014. From the analyzed data, the accuracy of referral diagnosis before JKN is 81.7% and after JKN 72.9%. (p=0.118), the accuracy of referral health facility before JKN is 63.7% and after JKN 72.9% (p=0.220), and the consistency of referral diagnosis before JKN is 89.4% and after JKN 84.7% (p=0.302).

Conclusions: There is no statistically significant difference between the accuracy of referral diagnosis, the accuracy of referral health facility, and consistency of referral diagnosis before and after the implementation of JKN.

Keywords: national health coverage program, obstetrics and gynaecology, outpatient clinic, referral.

Abstrak

Tujuan: *Untuk memahami pola kasus rujukan (ketepatan diagnosis rujukan, ketepatan asal fasyankes perujuk, dan kesesuaian diagnosis rujukan) di Poliklinik Obstetri dan Ginekologi sebelum dan setelah pelaksanaan JKN.*

Metode: *Penelitian ini adalah observasional potong lintang dengan menggunakan data rekam medis pasien yang dirujuk ke Poliklinik Obstetri dan Ginekologi RSUPN Dr. Cipto Mangunkusumo selama tahun 2013 dan 2014. Analisis dilakukan dengan analisis bivariat dengan chi square untuk membedakan ketepatan diagnosis rujukan, ketepatan asal fasyankes perujuk, dan kesesuaian diagnosis rujukan sebelum dan setelah pelaksanaan JKN.*

Hasil: *Terdapat peningkatan jumlah kunjungan Poliklinik Obstetri dan Ginekologi sejak dilaksanakannya program JKN pada tahun 2014, yaitu sebanyak 4.311 pasien. Jumlah subjek adalah sebanyak 222 subjek, terdiri dari 104 subjek pada tahun 2013 dan 118 subjek pada tahun 2014. Dari analisis data, didapatkan tingkat ketepatan diagnosis sebelum JKN adalah 81,7% dan setelah JKN 72,9% (p=0,118), tingkat ketepatan fasyankes perujuk sebelum JKN adalah 63,5% dan setelah JKN 71,2% (p=0,220), serta tingkat kesesuaian diagnosis sebelum JKN adalah 89,4% dan setelah JKN 84,7% (p=0,302).*

Kesimpulan: *Tidak ada perbedaan yang bermakna secara statistik antara ketepatan diagnosis rujukan, ketepatan fasyankes perujuk, dan kesesuaian diagnosis fasyankes rujukan sebelum dan sesudah pelaksanaan JKN.*

Kata kunci: *jaminan kesehatan nasional, obstetri dan ginekologi, poliklinik, rujukan.*

Correspondence author. Arresta V. Suastika. arrestasuastika@gmail.com

INTRODUCTION

The constitution of Republic of Indonesia of 1945 and the changes on 2002 said in article 28H section (1) that every person has rights to get health service and in section (3) that every person has rights for social insurance. It was also said in article 34 section (2) that the government must develop social insurance system for all the people.[1] The articles in the constitution of Republic of Indonesia of 1945 above, become the base for the formation of Social Insurance Administration Organization or Badan Penyelenggara Jaminan Nasional (BPJS) which is regulated in the constitution number 24 year 2011.[2,3] As said in the constitution number 24 the year 2011 article 9 section (1) that BPJS' function is to perform health insurance program and in the constitution number 40 year 2004 article 19 that health insurance is held in national scale, therefore there is the formation of National Health Coverage or Jaminan Kesehatan Nasional (JKN) which uses mandatory social health insurance system.[4]

Dr. Cipto Mangunkusumo General Hospital, as the national central general hospital, is the advance referral health facility. In the Republic of Indonesia Health Minister Regulation number 71 year 2013 article 2 section (1), it was said that the primary health facility and advance referral health facility, alongside with BPJS, perform the health service, as already said in JKN program.[5] BPJS has started performing National Health Coverage since 1st of January 2014.[2] BPJS is the transformation of the merger of institutions such as PT Askes, PT Jamsostek, PT TASPEN, and PT ASABRI who perform national health coverage before the formation of JKN.[2] Those coverages are Askes Sosial, Jaminan Kesehatan Masyarakat (Jamkesmas), Jaminan Tenaga Kerja (Jamsostek), and Asuransi Sosial Angkatan Bersenjata Republik Indonesia (ASABRI). There was also Jaminan Kesehatan Daerah (Jamkesda) which is different in every area in Indonesia and is regulated by the local government.

In Obstetric and Gynecology Outpatient Clinic in Dr Cipto Mangunkusumo General Hospital, there was an increase in the number of patients since the start of BPJS. It was reported that the number of patients in 2014 is 32.189, compared to the number of patients in 2013 which is 27.878.[6,7] The rising number of patients can cause the lack of quality in health services such as longer waiting time and longer surgery queue, which can affect patient's satisfaction upon the hospital's health service and JKN program.

There are few possible reasons on why there is a rise in the number of patients in Obstetrics and Gynecology Outpatient Clinic in Dr. Cipto Mangunkusumo General Hospital, two of the possible reasons are there is a growing number of the member of health coverage in BPJS era and the referral system hasn't gone as well as planned. From the number of patients in 2013, it was written that the member of Askes Sosial is 16,4 million, Jamkesmas 86,4 million, Jamsostek 8 million, and ASABRI 3 million, with the total number of members from those four national coverages in Indonesia is 103,9 million.[8] Meanwhile, in BPJS official website, on 30th of January 2015 it was written that the number of BPJS member in Indonesia is 135.739.984 people.[9]

BPJS has decided that the referral system which the advance health facility, which was said in Republic of Indonesia Health Minister Regulation number 71 year 2013 article 2 section (1), is divided into secondary health facility and tertiary health facility.[5] Secondary health facility gives specialist health service and tertiary health facility gives subspecialist health service. Tertiary health service can only receive a referral from the secondary health facility if the patient needs specialist or subspecialist health service and the referrer cannot provide the needed health service because of the lack of facility, equipment, or human resources. To receive the service in tertiary health service, the patient must show JKN member identification number and referral letter from the secondary health facility, unless the patient is in emergency.[10]

Generally, BPJS referral system is almost the same with the referral system in Askes era. The difference, especially in obstetrics and gynecology, is independent midwife practice is not included as the primary health facility anymore. Therefore, independent midwife practice must refer to the primary or secondary health facility to refer the patient to Dr. Cipto Mangunkusumo General Hospital. Other than that, by using JKN, the pregnancy examination and labour are not restricted by the number of children because it is the benefit of BPJS member, unlike Askes era

where the labour is only guaranteed until the second child. [11,12]

In Dr. Cipto Mangunkusumo General Hospital Obstetrics and Gynecology Outpatient Clinic, there was still direct referral from primary health facility and independent midwife practice. That is wrong according to the referral system.[10] The referrals are not only from Central Jakarta but from all areas in Jakarta. Dr. Cipto Mangunkusumo General Hospital, as the national referral centre, also gets a referral from areas outside Jakarta, even outside Java Island. Most of the cases are complicated and need subspecialist health service, which has been adjusted with the obstetrics and gynecology specialist competency. However, there is still inconsistency in the referral diagnosis and the working diagnosis in Dr. Cipto Mangunkusumo General Hospital. Many cases that are capable to handle in primary and secondary health facility are found in Dr. Cipto Mangunkusumo General Hospital. This can happen because of the limitation of referral doctor competency and the lack of diagnostic equipment in the referrer health facility.

Until now, there has not been a lot of research with the same variable, this can be caused due to JKN program is a new program. In Obstetrics and Gynecology Department of University of Indonesia Medical Faculty in Dr. Cipto Mangunkusumo, there are a few ongoing types of research with the same theme. Monitoring and evaluation from many sides are needed to develop the JKN program. The Health Ministry has rights to perform monitoring and evaluation on the performance of JKN program, as already written on Republic of Indonesia Health Minister Regulation number 28 year 2014.[13] By making the comparison of patterns of outpatient referral cases in Dr. Cipto Mangunkusumo General Hospital before and after the implementation of JKN program, the writer hopes the research can help the government to make evaluations and make better regulations for JKN program in the future.

METHODS

This was an observational cross sectional study, which analyze the pattern of referral cases (accuracy of referral diagnosis, accuracy of referral health facility and consistency of referral

diagnosis). Subjects were patients that were referred to Obstetric and Gynaecology Outpatient Clinic Dr. Cipto Mangunkusumo General Hospital in 2013 and 2014. The inclusion criteria were all patients in Obstetric and Gynaecology Outpatient Clinic Dr. Cipto Mangunkusumo General Hospital in 2013 and 2014. Patients whose data in medical records is incomplete or the medical record was already in retention were excluded from the research.

Intended sample size was 400 subjects. The subjects were taken by using stratified sampling method by dividing the minimum number of subjects into five outpatient clinics (obstetrics, gynecology, oncology gynecology, urogynecology reconstructive, fertility reproductive endocrinology), therefore each clinic has 40 subjects. To pick 40 subjects, all patients in 2013 and 2014 in each clinic were divided into 40. The resulting number was the multiplicative number to pick the subject from the medical record in each clinic. Data collecting was performed by three persons (first author, corresponding author, and research assistant). The diagnosis that was made when the patient first came in RSUPN Dr. Cipto Mangunkusumo was the reference of the type of cases.

Data were analyzed by 2x2 table with *chi-square* to compare the accuracy of referral diagnosis, the accuracy of referral health facility, and consistency of referral diagnosis, before and after the implementation of JKN. Data were processed with the help of Statistical Product and Service Solutions (SPSS) for Windows version 24.0. This research was ethically approved by Ethic Committee in RSUPN Dr. Cipto Mangunkusumo.

RESULTS

The total number of subjects was 222 subjects, consist of 104 subjects in 2013 and 118 subjects in 2014. Demographic characteristics of the subjects are shown in table 1. Characteristically, from 222 subjects, the age group who has the greatest number of visits in 2013 is the group of 31-40 years old, with 26.0% (27 subjects), meanwhile in 2014 is the group of 41-50 years old, with 28.8% (34 subjects). From the education background, most of the patients were high school graduates, 33.7% in 2013 (35 subjects) and 43.2% in 2014 (51 subjects). From the work background, in both 2013 and 2014, most subjects were housewife,

47.1% in 2013 (49 subjects) and 66.1% in 2014 (78 subjects). There is no significant difference in demographic characteristics before and after the implementation of JKN.

Table 1. Demographic Characteristics

Characteristics	2013		2014		P-value
	n	%	n	%	
Outpatient Clinic Visit					
Total	629.020	100	641.055	100	
Obstetrics and Gynecology Outpatient Clinic	27.878	4	32.189	5	
Age					0.380
≤20	5	4.9	2	1.7	
21-30	22	21.2	18	15.2	
31-40	27	26.0	33	28.0	
41-50	21	20.1	34	28.8	
51-60	16	15.3	19	16.2	
61-70	8	7.6	10	8.4	
>70	5	4.9	2	1.7	
Total	104	100	118	100	
Education					0.787
No school	17	16.4	18	15.2	
Elementary	22	21.2	17	14.4	
Middle School	16	15.3	17	14.4	
High School	35	33.7	51	43.2	
Diploma Degree	4	3.8	4	3.4	
Bachelor Degree	10	9.6	10	8.5	
Master Degree	-	-	1	0.9	
Total	104	100	118	100	
Work					0.458
Housewife	49	47.1	78	66.2	
Private employee	10	9.6	9	7.6	
Civil servants	5	4.8	6	5.1	
Student	9	8.7	3	2.5	
Not working	31	29.8	22	18.6	
Total	104	100	118	100	

Difference of insurance types between 2013 and 2014 is shown in table 2. In 2013 most patient used Kartu Jakarta Sehat (KJS) (24%) followed with self-paid (23%) and Askes (15%). After the implementation of JKN, 80% of the patient use JKN and variation of insurance types was much lower.

Table 2. Insurance Types

Insurance Types	2013		2014	
	N	%	N	%
JKN	10	9	94	80
Askes	15	15	5	4
KJS	24	23	3	2
PJKMU	1	1	1	1
Jamkesmas	10	9	1	1
Jamkesda	11	10	-	-
Jampersal	7	7	-	-
Self-paid	23	23	14	12
Others	3	3	-	-
Total	104	100	118	100

There was an increase of referral from Secondary and Tertiary Health Facility after the implementation of JKN, 89.8% in 2014 compared to 84.6% in 2013. In 2014 there were still direct referrals from a primary health facility (public health centres, general practitioners, medical clinics or midwives). Both in 2013 and 2014, type

B hospital was the greatest number of referral facility. There was no significant difference in the referral health facility area in both years. Most cases were referred from health facilities outside of Jakarta, 40.4% in 2013 and 47.5% in 2014. Central Jakarta was the second greatest number with 19.2% in 2013 and 16.9% in 2014.

Table 3. Accuracy of Referral Diagnosis, Accuracy of Referral Health Facility, and Consistency of Referral Diagnosis

Variables	2013		2014		*P-value*
	N	**%**	**N**	**%**	
Accuracy of Referral Diagnosis					
Accurate	85	81.7	86	72.9	0.118
Not accurate	19	18.3	32	27.1	
Total	104	100	118	100	
Accuracy of Referral Health Facility					
Accurate	66	63.5	84	71.2	0.220
Not accurate	38	36.5	34	28.8	
Total	104	100	118	100	
Consistency of Referral Diagnosis					
Consistent	93	89.4	100	84.7	0.302
Not consistent	11	10.6	18	15.3	
Total	104	100	118	100	

After the data analysis, the accuracy of referral diagnosis before the implementation of JKN was 81.7% (85 subjects) and after JKN was 72.9% (86 subjects), the accuracy of referral health facility before the implementation of JKN was 63.5% (66 subjects) and after JKN was 71.2% (84 subjects), the consistency of referral diagnosis before the implementation of JKN was 89.4% (93 subjects) and after JKN was 84.7% (100 subjects). The difference between accuracy of referral diagnosis, accuracy of referral health facility, and consistency of health diagnosis before and after the implementation of JKN was not statistically significant (p>0.05).

DISCUSSION

On the first year of JKN, there was a growing number of patients in Dr. Cipto Mangunkusumo General Hospital, compared to the previous year. There was a 4,311 rise in the number of patients who come to Obstetrics and Gynecology Outpatient Clinic in 2014. This condition is not corresponded with the JKN program, which theoretically there should be a decrease in the number of patients in a tertiary health facility because most of cases would be handled by the primary and secondary health facility. This may

be caused by the fact that in 2014, JKN program was just begun, therefore the referrer still needed adjustments in order to make proper referral. This is shown in the next years, there was a decreasing number of patients in Obstetrics and Gynecology Outpatient Clinic, 24,352 patients in 2015 and 24,303 patients in 2016.[14]

There was no significant difference in age, education, and work background in subjects. In 2013, the most subjects were 31-40 years old (26.0%), meanwhile in 2014 most subjects were 41-50 years old (28.8%). This could be happened because of the shifting of case to subspecialist case type in Dr. Cipto Mangunkusumo General Hospital since the start of JKN, whereas Oncology Gynecology and Urogynecology cases mostly happened in age >40 years old.[15,16]

Based on the type of insurance, the most widely used insurance before the JKN era is KJS 24%, followed by self-paid methods (23%) and Askes (15%). There is a difference when compared to the era after JKN, where as many as 80% of patients who visited in 2014 had used JKN, while for variations in insurance it was much lower. The type of payment most used after JKN in 2014 was the self-paid method (12%). In 2014

there was still 4% use of Askes, which at that time was a transition period for changes in Askes participants to JKN participants and Askes still can be used in 2014.

Since implementation of JKN with a tiered referral system, as many as 89.9% of patients in 2014 are referrals from second or third level health facilities. This is in accordance with the regulations applied by JKN, although it is expected that all referrals will come from second or third level health facilities. Prior to the implementation of JKN, as many as 15.4% of referrals came from first-level health facilities, where these cases could still be handled at second-level health facilities. This number has decreased since the implementation of JKN (10.2% in 2014), indicating that the tiered referral system has begun to work. From the characteristics of the referrer area, the most referral patients are referred from outside of Jakarta, amounting to 40.4% in 2013 and 47.5% in 2014. This reflects Dr. RSUPN Cipto Mangunkusumo as a national referral centre hospital. Central Jakarta is the largest referral area in DKI Jakarta with percentages in both years at 19% and 17%. This could happen because the Central Jakarta area is the closest location to Dr. RSUPN Cipto Mangunkusumo.

As the national referral central hospital, Dr. Cipto Mangunkusumo General Hospital was able to handle specialist and subspecialist cases that could not be handled in other health facilities. However, before the implementation of JKN, there were referral cases that should be handled in primary or secondary health facility instead of being referred to Dr. Cipto Mangunkusumo General Hospital. The mission of JKN was to decrease the number of referral cases that should not be referred to Dr. Cipto Mangunkusumo General Hospital. In our research, there was a decrease on accuracy of referral diagnosis from 81.7% in 2013 to 72.9% in 2014, even though insignificant statistically. Reported an increase from 78% in 2013 to 91%, 99%, and 98% in 2014, 2015, and 2016.[14] The reason behind the difference between this research and could not be explained yet, probably because of the difference in how to take samples.

There was an increase of 7.7% in accuracy of referral health facility after the implementation of JKN. However, it was statistically insignificant (p>0.05). Other research showed an increase in accuracy of referral health facility after the implementation of JKN. The increase was almost 100% on second year of JKN, the percentages from 2013 until 2016 were 78%, 90%, 99%, and 98%.[13] The accuracy of referral diagnosis and health facility were affected by health worker's understanding about referral system of JKN at the referrer health facility. Research on type B hospital showed that there was a clear regulation about the referral system of JKN that could be used as a guide for primary health facility to refer a patient to secondary health facility.[17]

The consistency of referral diagnosis was influenced by the doctor's ability to make a diagnosis in the referrer health facility. According to WHO, the risk factors of misdiagnosis were the lack of doctor's competency (in terms of experience and training), lack of specialist doctor, and the unavailability of diagnostic tools.[18] Other research about the accuracy of referral diagnosis said that doctor's experience had the biggest role in diagnosis.[19] Another factor that could affect the consistency of referral diagnosis in this research was there was a specialist doctor placement in Public Health Center in Jakarta until 2017. From the data in 2012 and 2015, 14 specialist doctors worked at Public Health Center in Jakarta.[20,21] However, it had changed since 2017, where no more specialist doctor were working in primary health facility.[22] The result for the consistency of referral diagnosis in this research might be different if it was done in another city or it was done after 2017.

The result of this research was inconsistent with the hypothesis, which there was a difference between the accuracy of referral diagnosis, the accuracy of referral health facility, and consistency of referral diagnosis in Obstetrics and Gynecology Outpatient Clinic Dr. Cipto Mangunkusumo General Hospital before and after the implementation of JKN. The goal of JKN program was increasing the accuracy of referral diagnosis and health facility, but in this research, there was a decrease in the accuracy of referral diagnosis, even though there was an increase in the accuracy of referral health facility. However, both variables were statistically insignificant. The same goes to the consistency of referral diagnosis, it was hoped that there was an increase after the implementation of JKN due to the better referral

system, the patient was referred from B type hospital with the accurate diagnosis. The possible reason for the results were because the data was taken from 2014, which was the first year of implementation of JKN, so it was still lacking in many aspects. It was supported by other research that reported there was an improvement on 2015 and 2016.[13] The limitations of this study, this study only included one year before and after the implementation of the JKN program so that it did not reflect the recent data. In addition, there are limitations to the completeness of medical records and the retention medical records.

CONCLUSIONS

There is no significant difference between the accuracy of referral diagnosis, the accuracy of referral health facility, and consistency of referral diagnosis in Obstetrics and Gynecology Outpatient Clinic Dr. Cipto Mangunkusumo General Hospital before and after the implementation of JKN.

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