

## Research Article

# National health coverage programs and quality of referral obstetrics and gynaecology clinic in Dr Cipto Mangunkusumo Hospital Jakarta

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### Abstract

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**Purpose:** Implementation of national health coverage contributes to the increasing number of outpatient visits in Obstetrics and Gynecology Department, Dr. Cipto Mangunkusumo Hospital. It may be caused by improper referral system or number of government insurance patients called as BPJS patients. Therefore, this study aims to analyse the pattern and quality of referral system in the implementation of national health coverage. **Method:** The quasi experimental study was conducted using pre and post analysis of the cases pattern and referral quality. It included accuracy of referred case diagnosis, accuracy of referring health facility, and consistency of referred case diagnosis. **Results:** There was an increasing number of referral visits in the early implementation of national health program; however, it declined overtime. There was reduction of general obstetrics and gynaecology cases and increase of sub-specialistic cases. It was in appropriate to the role of centre referral hospital in Indonesia. Around 98% referral diagnosis was correct to be referred, 82% cases came from correct health facility, and 98% referral diagnosis was consistent to Dr. Cipto Mangunkusumo hospital. **Conclusion:** The quality referral cases improves with the implementation of national health coverage program.

**Keywords:** national health coverage; diagnosis; quality of referral case

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## INTRODUCTION

An increasing number of patients had occurred in Obstetrics and Gynecology Outpatient Clinic at Rumah Sakit Cipto Mangunkusumo (RSCM)/Cipto Mangunkusumo Hospital since the implementation of national health coverage program in January 1<sup>st</sup>, 2014. The total number of visits in 2014 was 32,189 patients, compared to 27,878 patients in 2013. (1),(2). The increasing number of patients could reduce the health services quality. For example, longer waiting time at outpatient clinic and longer queue of surgery procedure affect the level of patient satisfaction to the health care service in hospital. This increasing number of visits was in accordance to the raise of number people administering in this program (called as Badan Penyelenggara Jaminan Sosial (BPJS) patients) and/or improper management of this referral system(3,4).

Referral service can be done on horizontally or vertically. Horizontal referral is carried out between health services within one level if the referrer can't provide appropriate health services with the patient's needs due to limitations facilities, equipment and / or manpower temporary or permanent. Vertical referrals are references made between different health services level, can be done from the lower level service to the higher level service or otherwise (3,5).

Health service referral system implemented in stages according to the medical needs (3): Starting from primary level health services (hospital level D) If further service is required specialist assessment, then the patient may be referred to the second level (hospital level C) Second level (hospital level C) health services in secondary level may only be granted on referrals of the primary level Third-level health services (hospital type A and B) can only be given on the referral of secondary and primary level. Vertical referrals should be made if the lower level health service cannot provide further treatment (3). Primary level health service should treat patient according to their competence (called as Standar Kompetensi Dokter Indonesia (SKDI)) and referring if there any cases that cannot be treated further or having limited facilities to the higher level healthcare. This regulation should also be worked when secondary is going to refer to third level (3). Nevertheless, lower healthcare level should not refer any patient which can be treated well in the current healthcare level. Higher level healthcare can refer back to the lower if the patient can be treated better in the lower healthcare for efficiency, convenience purpose or no longer required specialist care (3). Before 2014 the health insurance system in Indonesia is regulated by each region. Subsidized from regional revenues and cover only those communities categorized as poor by local government standards. Since 2016 the health insurance system applies nationally and integrated among regions of Indonesia. Last update on the growing number of

BPJS participants could be seen on the official website of BPJS; whereas, since March 2016, the Indonesian people administered for this program reaching 163,327,183 people (5). Data from the annual report of Obstetrics and Gynecology Department, Faculty of Medicine Dr. Cipto Mangunkusumo Hospital in 2013, there was approximately 60% referral cases coming from referral health facility that was not suitable, such as public health centers, general practitioners, and midwives. (1) Type A hospital is a hospital capable of providing specialists and subspecialists services. Type A hospital is designated as the highest referral hospital (top referral hospital) or central hospital. As a type A hospital, Dr Cipto Mangunkusumo Hospital and other type A hospital should only accept any referred patient with the needs of subspecialists, cases that need two or more specialist care, and if type B hospitals do not have facility for certain cases. Type B hospital is a hospital capable of providing a wide range of specialized and limited subspecialist medical services. Type B hospital was established in each provincial capital (provincial hospital) linking referral services from district hospitals.

Based on the problem stated above, this study aims to describe the impact on the quality of national health coverage implementation in Obstetrics and Gynecology Outpatient Clinic Dr. Cipto Mangunkusumo Hospital, particularly to measure the accuracy of referral case diagnosis (complicated case), the accuracy of referring health facility (type B or type A Hospital), and the consistency of the referral diagnosis in accordance with the diagnosis established at Dr. Cipto Mangunkusumo Hospital. Hopefully, these findings can help government to evaluate and develop policies related with national health coverage program in the future.

## METHOD

This quasi-experimental study design was conducted with a pre and post implementation evaluation in the form of time series to analyse the quality of referral cases in Obstetrics and Gynecology Outpatient Clinic Dr. Cipto Mangunkusumo Hospital. These qualities consisted of accuracy of referral case diagnosis, accuracy of referring health facility, and the consistency of referred case diagnosis in January, April, July and October of 2013 (before the implementation of national health coverage (JKN)) compared with January, April, July and October 2014, 2015, and 2016; respectively (after the implementation of JKN).

A total of 400 referral subjects who met inclusion and exclusion criteria were recruited. The cases consisted of 100 subjects for each year and it recruited by consecutive sampling method until reaching the number of subjects' requirement. To make similar distribution, we took 25 subjects in each month of January, April, July, and October; then the first registration number in the outpatient clinic

registration book every month was used as the first subject number, then the next subject number was in every 50 numbers, until we had 25 subjects for each month. If the registration number was a private patient (not a BPJS participant), then the next number of patients was selected into the subject.

After taking secondary data from medical records, we reviewed the referral case diagnosis and reasons, area of origin referring health facility, and also the diagnosis consistency that we established in Dr. Cipto Mangunkusumo Hospital. We analysed the data descriptively.

## RESULTS

Since the implementation of national health coverage program, the number of patients visiting

to the Obstetrics and Gynaecology Outpatient Clinic Dr. Cipto Mangunkusumo Hospital, both private and BPJS participants, showed a similar pattern which was increased from 2013 to 2014 (as the beginning of program), and then decreased between 2015 and 2016. Compared to the era before national health coverage implementation in 2013, the number of visits increased around 10% and decreased 15% in 2016. Similar condition and pattern also occurred in the other outpatient clinics of Dr. Cipto Mangunkusumo Hospital.

In the era of national health coverage, the number of public visits was declined, in contrary to the visits of BPJS patients. Compared to 2013, the increase number of BPJS patients was approximately 12%. It could also be seen, that the dissolving of health insurance programs in 2013, such as PJKMU (Program Jaminan Kesehatan Masyarakat

Table 1. The characteristics of total visits in outpatient clinic (URJT) RSCM

Characteristics	2013		2014		2015		2016	
	N	%	N	%	N	%	N	%
<b>Visits in outpatient clinic</b>	629,020	100	641,055	100	477,590	100	486,060	100
<b>Visits in obgyn clinic</b>								
Non Insurance	6,982	25	4,618	14	2,741	11	2,917	12
Insurance	20,896	75	27,571	86	21,611	89	21,386	88
<b>Type of insurance</b>								
BPJS	-	-	26,446	95	21,201	97	21,146	99
Askes	5,268	25	-	-	-	-	-	-
KJS	7,701	37	-	-	-	-	-	-
PJKMU	558	3	-	-	-	-	-	-
Jamkesmas	2,431	12	-	-	-	-	-	-
Jamkesda	3,401	16	967	4	302	2	185	1
Jampersal	1,483	7	-	-	-	-	-	-
Company	54	0	158	1	108	1	55	0
<b>Health facility origin</b>								
First level		23		5		4		6
Puskesmas	17		4		2		1	
GP	3		0		0		2	
Clinic	2		1		2		3	
Midwife	1		0		0		0	
Second level		77		95		96		94
Specialist	32		18		13		5	
Type D Hospital	0		0		0		0	
Type C Hospital	6		1		5		7	
Type B Hospital	38		76		77		82	
Type A Hospital	1		0		1		0	
<b>Health facility area</b>								
Central Jakarta	33		38		45		32	
West Jakarta	1		0		2		2	
South Jakarta	4		0		2		3	
East Jakarta	20		23		30		8	
North Jakarta	21		34		19		31	
Kep. Seribu	0		0		0		0	
Outside Jakarta	21		5		2		24	
<b>Case types</b>								
Obstetrics	26	26	15	15	18	18	18	18
General	23		14		11		12	
Maternal-Fetal	3		1		7		6	
Gynaecology	74	74	85	85	82	82	82	82
General	27		21		16		12	
Oncology	38		62		61		56	
Urogynaecology	7		2		3		13	
Endocrinology	2		0		2		1	
Reproductive health	0		0		0		0	
Social Obgyn	0		0		0		0	

Table 2. Quality of referral cases

Quality of Referral Cases	2013 N	2014 N	2015 N	2016 N
<b>Appropriate case diagnosis</b>				
Yes	78	91	99	98
No	22	9	1	2
<b>Referred by appropriate facility</b>				
Yes	39	76	78	82
No	61	24	22	18
<b>Consistent diagnosis</b>				
Yes	78	90	99	98
No	22	10	1	2

Table 3. Accuracy of referral case diagnosis

Referred Diagnosis	2013	2014	2015	2016
	%	%	%	%
• Breech	4,5	-	-	-
• Multiple Pregnancy	4,5	-	-	-
• Hypertension on pregnancy	-	11	-	-
• Pregnancy with SLE	-	11	-	-
• Pregnancy with TB	-	-	100	-
• 32 weeks of pregnancy with PPROM	-	-	-	50
• AUB	50	33	-	50
• SIL	4,5	-	-	-
• Uterine Leiomyoma	14	22	-	-
• Ovarian cystic neoplasms	18	11	-	-
• Molar pregnancy	4,5	-	-	-
• Ascites	-	11	-	-
N	22	9	1	2

Umum), Gakin (Keluarga Miskin), JAMKESNAS (Jaminan Kesehatan Masyarakat), Jamkesda (Jaminan Kesehatan Daerah), Jampersal (Jaminan Persalinan), KJS (Kartu Jakarta Sehat), and Askes (Asuransi Kesehatan) into the national health coverage program in 2014. Other visits to the Dr. Cipto Mangunkusumo hospital were guaranteed by some companies, such as Bank Mandiri, BNI, BRI, and PJKA. The number of these visits increased three times starting from the program and decreased along time.

Table 1 describes the characteristics of total visits at outpatient Obstetrics and Gynaecology Clinic Dr. Cipto Mangunkusumo Hospital. In the beginning of national health coverage program in 2014, there was an increasing number of referral coming from second or third level of health facility. In 2014, it showed almost 95% from all referrals compared with only 77% of referral cases in 2013. At the beginning of this era, referral from first level of health care facility still could be found around 5%, mainly from primary health centres around Dr. Cipto Mangunkusumo hospital, Central Jakarta. There was no cases referred directly from the Kepulauan Seribu region, both before and after national health coverage era. Since 2014, we did not found referral from the private midwives. However, we still found the references from first level of health facility, actually for emergency installation as 4% in 2015 and 6% in 2016. Referral from public health centre directly to RSCM was decreasing.

After implementation of national health coverage program, the obstetric cases tended to decrease, especially for uncomplicated obstetric case. Meanwhile, there was an increasing for complicated obstetrics cases or referral to maternal-fetal medicine division. Instead, the gynaecology referral cases slightly increased in early national health coverage era, the number of cases themselves reduced 50% until now similar with the number before national health coverage program. While the referral of sub-specialistic cases increased rapidly, about twice as much, especially the reference to oncology and urogynaecology division.

Table 2 shows the accuracy of referral case diagnosis by health facility. After the national health coverage program implementation in the beginning of 2014, there was significant improvement in quality of referral diagnosis. Almost all of referral cases were complicated cases, and they required referral service. In 2013, there were 22% referral cases with unsuitable reference to Obstetrics and Gynaecology Outpatient Clinic at Dr. Cipto Mangunkusumo Hospital. Furthermore, in the era of national health coverage, uncomplicated referral cases referred to Dr. Cipto Mangunkusumo Hospital decreased as the tiered level of this health system.

Regarding accuracy of referring health facility, majority cases (61%) were referred from health facility that was not in accordance before national health coverage program. After the program, the origin of referring health facility was improved, the referral cases were sent from second level of health facility. In 2016, approximately 82% referral cases were coming from type B hospital, compared to only 38% in 2013. There were also horizontal references from type A hospital (Fatmawati hospital), which aimed to urogynaecology outpatient clinic for special cases, such as neovaginoplasty due to vaginal agenesis.

Before national health coverage era, there was inconsistent diagnosis (22%) to diagnosis stated in Dr. Cipto Mangunkusumo hospital. This problem was mainly referred from first level of health facilities and almost all diagnosis were not suitable as referral cases. In this era, most of referral cases were already consistent with diagnosis in Dr. Cipto Mangunkusumo Hospital.

Before the era of national health coverage, approximately 22% among all diagnosis that referred to Dr. Cipto Mangunkusumo Hospital were not suitable. These cases were not supposed to be referred and should be handled in the lower level of health facility. Most of the cases were gynaecology cases. Abnormal uterine bleeding, ovarian cystic neoplasms, uterine leiomyoma were the most not suitable diagnosis in 2013. After the implementation of the era of national health coverage, those diagnosis were decreasing. Table 3 shows most of not suitable diagnosis decreased in 2015 and 2016 comparing to 2013 and 2014.

## DISCUSSION

As known, since January 1<sup>st</sup>, 2014 the Indonesia Government has applied National Health Coverage System or Sistem Jaminan kesehatan Nasional (SJKN) with tiered referral system model, as contained in Permenkes No. 001 Tahun 2012 (6). With the implementation of the tiered referral system, it was expected that the concentration of patients would be increased and focused at first level of health facility. Therefore, the Dr. Cipto Mangunkusumo Hospital as tertiary level of health facility, there should be a decreasing number of BPJS visits because most cases have already been treated at first level or second level of health facility. Only complicated cases or cases that unable to be treated in second level of health facility will be referred to Dr. Cipto Mangunkusumo Hospital. In conclusion, the quantity of BPJS visits to Dr. Cipto Mangunkusumo Hospital will be decreased, but the quality of the cases will be increased (complicated cases from second/ third level of health facility).

Compared to the era before national health coverage in 2013, there was an increasing number of BPJS referral visits at the beginning of the program in 2014, but the number of visits began to decline with the time passing (1) (2). According to the origin of referring health facility on tiered referral, before implementation of national health coverage, about 60% referral cases were not necessary for being referred to Dr. Cipto Mangunkusumo Hospital because it could be handled at second level of health facility. After implementing program, the quality of the referring health facility was improving and currently about 82% of cases referred to Dr. Cipto Mangunkusumo Hospital derived from type B hospital. BPJS hope that referral cases to Dr. Cipto Mangunkusumo Hospital could follow the tier referral system appropriately (3).

During the national health coverage program, there was decreasing number of general obstetrics and gynaecology cases, otherwise sub-specialization cases were increased. This situation is in accordance with the role of the Dr. Cipto Mangunkusumo Hospital as a reference tertiary health facility, besides having sub-specialization consultants, also supported by modern medical equipments (7,8).

As the highest referral hospital, Dr. Cipto Mangunkusumo Hospital often received referral cases with a simple diagnosis that should be treated in second level or even first level health facility.<sup>7</sup> Since national health coverage era, the quality of the referral diagnosis accuracy improved, and currently about 98% of the referral diagnosis was suitable to be referred. Similarly, about the quality of the consistency of diagnosis, approximately 98% referral diagnosis was consistent with the diagnosis that established on Dr. Cipto Mangunkusumo Hospital.

Although the assessment of service quality is very subjective and dynamic, the quality of service can still

be measured by comparing the perception of customer service expected (expected service) with the service received and customer perceived (perceived service) (9) (9,10). Alternatively, this measurement should be started with recognizing customer needs and ends on customer perception (11).

According to Robert and Prevest, health care quality is multi-dimensional, both in terms of health care service users (health consumer) and health care providers (health providers). In terms of health care providers, quality of service related to the conformity of the service with the development of science and modern medical technology (11,12).

Therefore, the quality of the references in the Dr. Cipto Mangunkusumo Hospital could be rated as good quality service. This conclusion was stated based on the evidence in the form of sub-specialization outpatient clinic services, which was a scientific developments and modern medical technology service. Besides, the quality of the referral can also be assessed to determine the condition or situation at the beginning and end of the referral, in this case is to assess the accuracy of referral diagnosis, the origin of referring health facility accuracy, and the diagnosis consistency from each referral.

## CONCLUSION

The presence of national health coverage program improves the quality of referral to Dr. Cipto Mangunkusumo hospital. General obstetrics and gynaecology cases decreased, otherwise sub-specialization cases increased. Similarly, compared to the era before program, the quality of referral case diagnosis and tier referral system are getting better.

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