

ANTENATAL CARE VISITS IN PREECLAMPTIC PATIENTS BEFORE AND DURING NATIONAL HEALTH INSURANCE (NHI) PROGRAM

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Abstract—Health care financing was one of the health problems associated with access to health services. In addition, it also affected to the increase in maternal mortality ratio (MMR) caused by conditions of pregnancy and childbirth with common complications that could be pressed with quick access to quality obstetric services. The cause of maternal death was known as "4 T" (too old, too young, too often and too much) and "3T" (too late in making decisions, too late in carrying, and too late in getting service). One of the efforts made by the Indonesian government to help accelerate MMR reduction was to implement the National Health Insurance (NHI) Program with easier access to health services with an affordable financing system that effected to health services by doing antenatal care routinely and quality. But in fact, during the implementation of the NHI program there was still contributed to high numbers of MMR and preeclampsia/eclampsia remained the main cause of maternal death. This study aims to determine the characteristics of antenatal care visits in mothers with preeclampsia that occurred in the era before and during the implementation of NHI program (2012-2016) in Dr. Soetomo Hospital Surabaya, Indonesia. This was a descriptive cross sectional study in tertiary hospital. The sample was patient who diagnosed preeclampsia in Dr. Soetomo Hospital in the period 2012 to 2016 and was taken by proportionally simple random sampling with total samples were 252 patients. The data extracted from medical record. The results showed that in the era before and during NHI, most of the patients included in the age group of 20-35 years and the majority did antenatal care visits quite well (≥ 4 times). In the era during NHI, even women with risky age of < 20 years and > 35 years who visited antenatal care < 4 times experienced an increase in proportion compared to the era before NHI (39.4%). In both eras, there were similarities that mothers who did antenatal care visits quite well (≥ 4 times) had an education level dominated by higher education (64.9% before NHI vs 78.6% during NHI). Most of the patients with the frequency of antenatal care visits were quite well dominated by housewives even increased during NHI (65.8%). In the era before NHI dominated by primiparous with antenatal care visits were quite well (≥ 4 times) but different during NHI which was dominated by multiparous mothers. In the case of severe preeclampsia and preeclampsia in both eras tended to have antenatal care visits were quite well. It is necessary to improve the quality of antenatal care services from health services to prevent the development of complications due to late detection of preeclampsia.

Keywords—Preeclampsia, severe preeclampsia, NHI, antenatal care

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I. INTRODUCTION

Based on data of Indonesian Demography and Health Survey in 2012 showed that MMR in Indonesia rose sharply at 359 deaths per 100,000 live births [1]. This figure was still

far from the target of the fifth Millennium Development Goals (MDG's) that in 2015 was expected to be 102 deaths per 100,000 live births, even now MDG's has been replaced by Sustainable Developed Goal's (SDG's) which determines even heavier targets of less than 70 deaths per 100,000 live births [2]. The data from the East Java Provincial Health Office, during 2012 to 2015 there was a trend of a decrease in maternal mortality, from 97.43 per 100,000 live births in 2012, which continued to decline until 2015 reaching 89.6 per 100,000 live births, but this figure increased returned to 91 per 100,000 live births in 2016. When compared with the absolute number, it appeared that maternal mortality cases experienced a fluctuating number from 2012-2016 [3]. Nevertheless, MMR in Surabaya had decreased every year, but this still remained a problem if these numbers were still above the SDG's target so that this problem required more attention, especially related to the causes of MMR which preeclampsia/eclampsia always as dominant factor [3;4].

One of the causes of high maternal mortality was a result of the conditions of pregnancy and childbirth with common complications that can be overcome with quick access to quality obstetric services. The causes were summarized in "4 T" (too old, too young, too often and too much) and "3 T" (too late in making decisions, too late in carrying, and too late in getting service). Other factors that also influence were poor women's empowerment, educational background, family socioeconomic, community and political environment, policies, gender inequality, and the low attention of men to pregnant and childbirth mothers. In some areas, maternity decisions were not determined by the mother who was pregnant, but by her husband or family [5].

In assisting the acceleration of the reduction of MMR in Indonesia, the Indonesian Government's efforts were to implement the National Health Insurance program (NHI). The Indonesian government guarantees health services to all pregnant, childbirth and postpartum women. In the context of maternal and child health, this mean that indirectly the NHI program contributed to the problem solving of MMR which was still high in Indonesia, that namely by providing convenience in terms of economic [6]. The government must worked extra to reduce maternal mortality by promoting efforts to require pregnant women to use maternal health services by doing antenatal care routinely and quality [7]. Antenatal care (ANC) was an effort to detect early preeclampsia symptoms in pregnancy and the early detection of preeclampsia's risk factors so that the risk of preeclampsia in pregnancy was expected to reduce the risk of worsening conditions and further complications in pregnancy and childbirth and also ultimately reduce maternal mortality [8]. Ideally, antenatal care were carried out in a plenary session covering history, physical examination, diagnosis and therapy according to preeclampsia cases [9]. Antenatal services were called "complete" if carried out in accordance with antenatal service standards by health services [5]. A regular antenatal examination could detect any abnormalities that lead to the diagnosis of preeclampsia and might arise at any time so that it could be immediately addressed with a good referral system before influencing the pregnancy and developing into more severe complications [10]. This study aims to determine the characteristics of antenatal care visits that occurred in the era before and during the implementation of the NHI(2012-2016) in Dr. Soetomo Hospital Surabaya.

II. MATERIAL AND METHODS

The type of research used in this study was descriptive observational, with a cross sectional research design. This was conducted in Dr. Soetomo Hospital Surabaya from April to May 2018 with data collection at the Medical Record Installation section, Delivery room section and the Information and Communication Technology Installation at Dr. Soetomo Hospital Surabaya. The sample were 252 samples which divided into 102 medical records representing the period before NHI (2012-2013) and 150 medical records for data during NHI

(2014-2016) which were used to describe the characteristics of antenatal care visits for pregnant women who suffer from preeclampsia in Dr. Soetomo Hospital Surabaya. The sample of this study were pregnant women who were diagnosed with preeclampsia in Dr. Soetomo Surabaya for the 2012-2016 period which met the inclusion and exclusion criteria. The sampling method was done by simple random sampling technique. This study used secondary data of patient's medical records and was collected using data collection sheets. Data analysis was carried out with crosstab analysis which aimed to descriptively analyze the frequency distribution and percentage of all variables. The results of the study will be presented in the form of tables with narratives.

III. RESULTS

3.1 Socio-Demographic Characteristics of Preeclamptic Patients

Characteristics of patients who suffered from preeclampsia based on the frequency of antenatal care visits in the era before and during NHI in Dr. Soetomo Hospital can be seen in table 1 below:

Table 1 Characteristics of Socio Demographic in Preeclamptic Patients Based On The Frequency of Antenatal Care Visits

Variables	Before NHI		During NHI	
	< 4 times n (%)	≥ 4 times n (%)	< 4 times n (%)	≥ 4 times n (%)
Maternal Age (years)				
<20 and >35	8 (32.0)	28 (36.4%)	13 (39.4)	36 (30.8)
20-35	17 (68.0)	49 (63.6%)	20 (60.6)	81 (69.2)
Level of Education				
Well-educated	12 (48.0)	50 (64.9)	22 (66.7)	92 (78.6)
Low-educated	13 (52.0)	27 (35.1)	11 (33.3)	25 (21.4)
Work				
Housewives	23 (92.0)	50 (64.9)	20 (60.6)	77 (65.8)
Work	2 (8.0)	27 (35.1)	13 (39.4)	40 (34.2)
Parity				
Primiparous	13 (52.0)	49 (63.6)	14 (42.4)	47 (40.2)
Multiparous	12 (48.0)	28 (36.4)	19 (57.6)	70 (59.8)

Based on Table 1, it can be seen that in the era before and during NHI most of the patients were included in the age group of 20-35 years and the majority of them did antenatal care visits quite well (≥ 4 times). Whereas in the era during NHI, even women with risky age, <20 years and / or > 35 years, who visited antenatal care <4 times experienced an increase in proportion compared to the era before NHI as much as 13 subjects (39.4%). In both eras have similarities, mothers who did antenatal care visits quite well (≥ 4 times) had an education level dominated by higher education about 50 subjects (64.9%) in the era before NHI and 92 subjects (78.6%) in the era during NHI. Most of the patients were dominated by housewives, and the frequency of antenatal care visits was quite well (≥ 4 times) carried out by mothers who were housewives and increased in the era during NHI as many as 77 subjects (65.8%). In the era before NHI, primiparous mothers with antenatal care frequency were quite well (≥ 4 times) more and inversely compared to the era during NHI which was dominated by multiparous mothers.

3.2 Characteristics of Antenatal Care Visits Based on The Severe of Preeclampsia

patients consisted of housewives so that the frequency of antenatal care visits was in a fairly good category.

Based on the theory stated that by conducting antenatal care visits in accordance with the Indonesian Government's recommendation that was at least four times (once in the first trimester, once in the second trimester and twice in the third trimester) it was expected to detect abnormalities that occurred during pregnancy so the early treatment could be implemented as soon as possible. Antenatal care was an important part of the pregnancy process because it aimed to ensure a natural and safe labor process, antenatal care was directed to all pregnant women, which was one of the efforts to monitor pregnancy so that appropriate early treatment could be done when a serious pregnancy abnormalities was detected. Through routine antenatal care, it was expected that mothers could prevent and reduce more severe pregnancy complications [15].

Contrary to the theory, this study showed that the frequency of antenatal care visits was good enough (≥ 4 times) but also found a high proportion of preeclampsia and severe preeclampsia with serious complications cases. This became a problem where the most important point in antenatal care programs was not only seen from the frequency of visits but also more attention to the quality of services. In accordance with antenatal care services that should be carried out by making early detection efforts based on screening of risk factors, physical examination to see an increase in blood pressure and signs of preeclampsia, as well as investigations to confirm the diagnosis. In this study, even though mothers did antenatal care in good frequency, but suffering from preeclampsia might occur because there was still no maximum antenatal care services provided by health services to checked routine antenatal care. Contrary to the results of research at Ismailia General Hospital, Egypt showed that the frequency of antenatal care visits during pregnancy had a significant effect on maternal and perinatal outcomes in preeclampsia's patient, this indicated that with good frequent antenatal visits it would reduce the risk of maternal and perinatal complications. [16].

The research in Surabaya regarded the quality of antenatal care services for midwives in several health centres in Surabaya found that the quality of services provided by health services was still less than optimal, especially in screening risk factors for preeclampsia [17]. Examination of good and quality pregnancies could be provided by qualified health workers who were not only measured by the technical capabilities and facilities, but also by the health workers' attention and views on the problem of midwifery services in the community, start from the detection of problems, efforts to improve the quality, and efforts to prevent diseases [18].

V. CONCLUSION

Characteristics of antenatal care visits with a good frequency (≥ 4 times) in mothers who suffer from preeclampsia in both eras looked almost the same, which was dominated by mothers aged 20-35 years, highly educated, status as housewives, but in the era during NHI multiparous more dominating than primiparous. Generally, cases of preeclampsia and severe preeclampsia have a record of antenatal care visits were good enough, severe preeclampsia tended to do antenatal care visits with a fairly good frequency (≥ 4 times). Monitoring and evaluation is needed in the quality aspect of antenatal care services carried out by health services to provide maximum service and can detect symptoms of preeclampsia early and have an impact on reducing the risk of developing complications of preeclampsia in maternal and perinatal.

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