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ORIGINAL ARTICLE

Development of Financial Support Program for High Risk Pregnant Women

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Abstract
Objectives: The purpose of this study was to develop a financial support program for high-risk pregnant women based on opinions obtained using a questionnaire survey.
Methods: The program development involved two steps: (1) developing a questionnaire through reviewing previous financial support programs for maternal care and then validating it via professional consultation; and (2) drafting a financial support program. Sixty professionals, 26 high-risk pregnant women, and 100 program implementers completed the questionnaire between August 2014 and October 2014.
Results: Based on the obtained professional consultation and survey investigation, the framework of the financial support program was constructed. The suggested recipients were mothers with early labor pains, mothers who have been hospitalized for > 3 weeks, and mothers who used uterine stimulant Pitocin during hospitalization. All hospitalization, medication, and examination costs needed to be supported considering the income level of the recipient.
Conclusion: A basic policy for financially supporting high-risk pregnant women has been developed. The efficacy and feasibility of the policy needs to be carefully examined in future studies.

1. Introduction

There is no consensus definition for a high-risk pregnancy, but this condition is normally defined as when the woman or fetus experiences a problem that requires medical treatment [1]. It has also been defined as the woman experiencing at least one instance of a particular type of problem before, during, or after pregnancy [1]. A high-risk pregnancy increases the probability of death or disease infection in either the pregnant woman or fetus compared with a normal pregnancy, and may cause complications before, during, and after pregnancy [2]. Also, a high-risk

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pregnancy increases the probabilities of a premature birth and of a poor prognosis for the newborn baby [3].

The number of high-risk pregnancies is increasing in Korea, which is linked to the low birth rate and the steep increase in the average age of pregnancies. According to the National Statistics Office, the mean age of a mother when giving birth to her first child was 30.97 years in 2014, compared with 28.83 years in 2004 [4]. Meanwhile, mothers older than 35 years constituted 21.6% of pregnancies in 2014, compared with 9.4% in 2004. This phenomenon is linked to the mean age at marriage increasing from 26.49 years in 2000 to 29.59 years in 2013 [5].

Obstetric complications are increasing with the escalation of aged pregnancies. Older pregnant women have a higher illness rate related to obstetric complications such as gestational diabetes and hypertension, and illnesses related to the reproductive system such as uterine myoma [6−8]. This situation increases the risk of poor pregnancy outcomes such as giving birth to a premature or low-birth weight baby [9]. Illnesses such as edema before, during, and after childbirth, proteinuria and hypertensive disorder, and high-risk maternity management were more prevalent among mothers aged 30−34 years in 2010, and the prevalence was also increasing most rapidly in this age group [10]. The actual prevalence in the age group of 30−34 years was 6,141 (23%) in 2006, and had increased markedly to 10,649 (29%) in 2010 [10]. Therefore, both the absolute number and the proportion within this age group have increased.

Medical expenses are higher in high-risk pregnancies than in normal pregnancies due to the associated increased complications. Pregnancy expenses in the United States from 2000 to 2012 were mainly associated with issues related to high-risk pregnancies, such as hospitalization, childbirth problems, multifetal pregnancy, cesarean operation, high-risk childbirth, premature childbirth, low-birth weight infants, hypertension, diabetes, anemia, cancer, and *in vitro* fertilization. Expenses related to high-risk pregnancies generally represent a huge proportion of the total pregnancy expenses [11]. The mean estimated cost of a mother being hospitalized due to pregnancy in the United States was $3,306 in 2008 and $9,234 in 2012 [11]. However, for cases where complications occurred during pregnancy and the mothers had to deliver prematurely in the 25th week, the mean cost was $326,953. The number of high-risk pregnant women in Korea is increasing, as are the related medical expenses. The number of cases of childbirth-related illness in high-risk pregnancies was 25,855 in 2006 and 53,507 in 2010; the total medical costs increased 2.1-fold over the same time period, from 2,700 million Korean won (KRW) in 2006 to 5,700 million KRW in 2010 [10].

The Korean government funds a financial support program aimed at reducing the burden of high medical expenses experienced by some pregnant women, which provides up to 500,000 KRW per pregnancy (up to 700,000 KRW for a multifetal pregnancy). This support fund can be used to pay medical costs due to bleeding, excessive nausea during pregnancy, early labor pains without signs of childbirth, and postnatal perspiration, but this fund is insufficient to cover all medical costs associated with high-risk pregnancies and childbirth. Some local governments are issuing coupons that can be used to pay for examinations of deformed children or are supporting medical costs in other ways, but this aid is limited to a specific year and lacks continuity [12]. Very few local governments are running aid systems, which means that on a nationwide basis there is essentially no support for high-risk pregnancies.

In order to support the costs associated with high-risk pregnant women maintaining their pregnancy and having a healthy childbirth, the government needs to implement active programs. This study provides details of a new suggested governmental program, named High-Risk Pregnant Women Aid Program (HRPWAP), in areas such as the support target, support period, means of support, support scope, submission of necessary documents, and support process.

2. Materials and methods

2.1. Study design and participants

This study was a survey-based investigation aimed at developing a financial support program for the HRPWAP. This was achieved by including professionals in this field, high-risk pregnant women, and program implementers as study participants who were selected by the study team using a convenience sampling method. The professionals comprised 17 obstetricians, 20 obstetrics nurses, and 10 professors in the field of Women's Health Nursing, and 13 professors in the field of Community Health Nursing. The number of high-risk pregnant women was 26 and the program implementers comprised eight heads of public health centers and 92 public servants in public health centers in charge of mother and child health. The total number of participants in this study was 186.

2.2. Study tool

The study tool was a structured self-report survey. No survey was available that was suitable for the purpose of this study, so the research team had to develop a new survey based on relevant data. From May 2014 to August 2014, the study team had consultation meetings with 15 advisory committee members while considering the development of a financial support program, comprising six public servants in public health centers in charge of mother and child health, one staff member of the Health Insurance Corporation, five nurses in the delivery room, one obstetrician, and two high-risk pregnant women. These consultations also considered programs related to the financial support program for