

The Hospitalization Assistance Policy System in Japan

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Abstract

In Japan, the hospitalization assistance policy (HAP) system helps pregnant women who, for financial reasons, cannot give birth at medical institutions. The HAP system allows these women to deliver at specified midwifery institutions. We compared women with singleton pregnancies who gave birth with the HAP system (n=150) or without (control; n=2,869). Although the percentage of women younger than 20 years was significantly greater in the HAP system group than in the control group, the parity number in the HAP system group was significantly greater than that in the control group. The percentage of non-Japanese was significantly higher in the HAP system group than in the control. The rates of preterm delivery and of low birth weight (<2,000 g) were significantly greater in the HAP system group than in the control group. From the perspective of perinatal medicine, social risks, such as poverty, present some perinatal problems, even in Japan.

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In Japan, the hospitalization assistance policy (HAP) system, based on the Child Welfare Act, assists pregnant women who, for financial reasons, cannot give birth at medical institutions. The HAP system allows these women to deliver at specified (midwifery) institutions. The main objectives of the HAP system are to help pregnant women who: 1) receive the livelihood protection because they are unable to maintain minimum living standards because of poverty, 2) live in households exempt from the residence tax, and 3) live in households in which the income tax is less than ¥8,400 (=about 100 US dollars) per year.

Our hospital, which is a large perinatal center in Tokyo, Japan, is also a specified institution for the HAP. From January 2009 through June 2010, there were 2,869 singleton deliveries at our hospital at 22

weeks' gestation or later. Of these deliveries, 150 (5.2%) were under the HAP system. We compared, by means of the χ^2 test, patients who gave birth with or without (control group) the HAP system at our institution. Odds ratios (ORs) and 95% confidence intervals (CIs) were also calculated. Differences with $p < 0.05$ were considered significant.

As shown in **Table 1**, although the percentage of women younger than 20 years was significantly greater in the HAP system group than in the control group ($p < 0.01$), the mean parity number was significantly greater in the HAP system group (1.6±1.6) than in the control group (0.7±1.0, $p < 0.01$ by unpaired t -test). The rate of non-Japanese was significantly greater in the HAP system group than in the control ($p < 0.01$). The rate of preterm delivery (gestational age at delivery < 37 weeks) and the rate

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Table 1 Patient characteristics and complications associated with the Japanese hospitalization assistance policy system

	HAP system	Control	P value
N	150	2,719	
Maternal age			
<20 years	13 (8.7%)	31 (1.1%)	<0.01
≥40 years	14 (9.3%)	184 (6.8%)	0.23
Parity			
0	48 (32%)	1,399 (51%)	<0.01
≥4	17 (11%)	29 (1.1%)	<0.01
Non-Japanese	41 (27%)	123 (4.5%)	<0.01
Preeclampsia	17 (11%)	204 (7.5%)	0.09
Preterm delivery	17 (11%)	169 (6.2%)	0.01
Emergency cesarean delivery	19 (13%)	279 (10%)	0.74
Postpartum hemorrhage			
≥1,000 mL	7 (4.7%)	175 (6.4%)	0.39
Neonatal birth weight			
<2,000 g	7 (4.7%)	59 (2.2%)	0.04
Perinatal death	0 (0%)	5 (0.2%)	0.59
Apgar score <7			
at 1 minute	5 (3.3%)	57 (2.1%)	0.31
Umbilical artery pH <7.1	2 (1.3%)	39 (1.4%)	0.92

Data are presented as number (percentage).

Table 2 Patient characteristics and complications associated with the Japanese hospitalization assistance policy system in patients with preterm delivery

	HAP system	Control	P value
N	17	169	
Maternal age			
<20 years	4 (24%)	3 (1.8%)	<0.01
≥40 years	0 (0%)	13 (7.7%)	0.24
Parity			
0	7 (41%)	74 (44%)	0.84
≥4	3 (18%)	5 (3.0%)	<0.01
Non-Japanese	7 (41%)	10 (5.9%)	<0.01
Preeclampsia	5 (29%)	20 (12%)	0.08
Chorioamnionitis*	5 (29%)	115 (68%)	<0.01

Data are presented as number (percentage).

*Histological chorioamnionitis in the placenta.

of low birth weight (<2,000 g) were significantly greater in the HAP system group than in the control group (preterm labor: OR, 1.9; 95% CI, 1.1–3.3; $p=0.01$; low birth weight: OR, 2.2; 95% CI, 1.0–4.9; $p=0.04$).

Table 2 shows the patient characteristics and complications associated with the HAP system in patients with preterm deliveries. Teenaged mothers

are at higher risk for preterm labor than are older mothers, and the risk increases for the second pregnancies of teenaged mothers; these risks highlight the importance of antenatal care and providing health education for teenage mothers¹. Our data support this conclusion¹.

As shown in **Table 2**, in the present study the rate of histological chorioamnionitis in the placenta, which is associated with preterm labor², was significantly lower in the HAP system group than in the control group ($p<0.01$). In addition, 6 (35%) of the premature deliveries in the HAP system group seem to have been related to the mothers' personal circumstances and not only to perinatal complications, such as preeclampsia and chorioamnionitis. The number of antenatal hospital visits recommended by the Japanese government is 14 or more, and local governments in Japan offer the Prenatal Checkup Cards for antenatal hospital visits. With the cards every pregnant woman in Japan can receive 14 times of free prenatal checkup. However, the pregnant women with financial problems sometimes avoid medical consultations. For example, the first antenatal hospital visit of 15 women (10%) in the HAP system group was at 37 weeks' gestation

or later (vs. 1.2% in the control group, $p<0.01$); a possible reason for this difference is that underage or non-Japanese women sometimes do not know about the HAP system or specified midwifery institutions. Unfortunately, in addition, these women were refused medical examinations and treatments at some nonspecified midwifery institutions for financial reasons without being informed of the HAP system. Thus, they occasionally did not receive appropriate antenatal care, such as tocolysis, for preventing preterm labor.

From the perspective of perinatal medicine, social risks, such as poverty, present some perinatal

problems, even in Japan.

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