

Health Insurance as a Solution for Barriers to Maternal Healthcare Access in Indonesia

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Introduction

Globally in 2015, as many as 275,288 women died due to pregnancy- and childbirth-related causes.¹ The majority (99%) of deaths occurred in developing countries, including in Indonesia, where the maternal mortality rate (MMR) is still 305 per 100,000 live births.² Despite the passing of various policies to improve maternal health, Indonesia still faces challenges in reducing MMR—specifically, in avoiding delays in receiving maternal healthcare. Thaddeus and Maine listed the “three delays” in seeking care for maternal complications as the following: (1) the delay in recognizing danger signs and deciding to seek care; (2) the delay in reaching healthcare; and (3) the delay in receiving adequate maternal healthcare.³

Inability to reach a health facility in time is caused by a number of factors, including the distribution of health facilities in an area, the transport time required to reach a facility, and the road conditions going toward a health facility.³ Several studies have reported that distance to a health facility is a main contributing factor for maternal healthcare utilization. Geographic factors, including the physical distance that inhibits transportation and utilization of healthcare, plays a primary role in rural and outermost island areas.⁴ A woman’s socioeconomic status (SES) may also financially limit her ability to receive adequate healthcare.³

The Government of Indonesia (GOI) has made various efforts to increase utilization and access to maternal healthcare. During the 1980s, the Ministry of Health (MOH) launched a village-based midwife educational program and deployed one midwife to each village throughout Indonesia, with the goal of improving the role of the community in maternal health.⁵ The MOH also launched a maternity insurance (*Jampersal*) program in 2011 in an effort to mitigate financial barriers to receiving maternal healthcare. This program provides antenatal care (ANC), delivery, postnatal care (PNC), and postpartum family planning services free of charge. Studies show that *Jampersal* increased the coverage of skilled birth attendance (SBA) and health facility-based delivery.⁶ In 2014, the *Jampersal* program was replaced with the National Health Insurance (JKN) program. The GOI also implemented a policy to provide basic emergency obstetric and neonatal care (PONED/BEmONC) in primary-level facilities and comprehensive emergency obstetric and neonatal care (PONEK/CEmONC) in referral facilities. Maternity waiting homes have also been established in various areas as a solution to challenges experienced by mothers in rural areas in reaching adequate maternal care; however, studies report that physical distance and cost remain as barriers to maternal healthcare utilization. This issue is primarily observed in some geographic areas that require costly air and sea

transportation that cannot be covered by JKN or areas where transport to facilities is limited or frequently dictated by weather conditions. Given these challenges, this study aims to identify financial and non-financial barriers that limit utilization of maternal healthcare in the JKN era.

Methods

The study uses data from the 2014–2015 Indonesian Family Life Survey Fifth Wave (IFLS-5) and the 2014 Village Potential (PODES) Data. IFLS-5 provides information on utilization of maternal healthcare, financial barriers, and women’s socioeconomic and demographic characteristics; PODES 2014 contains data on distance and ease of access to health facilities (*puskesmas* and hospitals).

Data analysis was performed on 4,340 women of reproductive age (15–49 years) who had a live birth in the five years before the survey. Logistic regression analysis was performed to determine the influence of financial and non-financial barriers on utilization of maternal healthcare.

Table 1. Variables Used in the Analysis

Variable	Definition
Antenatal care (ANC) (4+)	ANC \geq 4 times
Health facility-based delivery	The woman delivers at a health facility (hospital, <i>puskesmas</i> , private clinic, private practice midwife/health worker)
Postnatal care (PNC)	PNC care within 40 days after delivery
Distance to a hospital	Three categories of distance to a hospital: nearby (<5 km), middle distance (5–10 km), and far (>10 km)
Distance to a <i>puskesmas</i>	Three categories of distance to a <i>puskesmas</i> : nearby (<2 km), middle distance (2–5 km), and far (>5 km)
Access to hospital and <i>puskesmas</i>	Four categories of access to hospital and <i>puskesmas</i> : very easy, easy, difficult, and very difficult
Insurance ownership	Enrollment in a health insurance program (has insurance, doesn’t have insurance)
Socioeconomic status (SES)	Five categories of SES based on possession of goods: poorest, poor, middle, wealthy, wealthiest

Results

Although most women received ANC, only half sought PNC. Figure 1 illustrates that the majority of pregnant women fulfilled the required minimum four ANC visits (84%), 80% delivered at a health facility (50% at a *puskesmas* and 30% at a hospital), but only 41% of those women utilized PNC.

The percentage of women who had a facility-based delivery also decreased as the distance between a woman's home and the hospital increased (Figure 2a). Among women who lived less than 5 km from a hospital, 43% delivered at a hospital. As distance to hospital increased to 5–10 km and more than 10 km, the percentage of women who delivered at a hospital dropped to 31% and 20%, respectively. The percentage of women who had facility-based delivery further decreased as access to hospitals became more difficult (Figure 2b). Among women who reported having great difficulty in reaching a hospital, only 16% delivered at a hospital. In contrast, 47% of women who had very easy access to a hospital delivered at a hospital.

Figure 1. Percentage of Mothers Who Used Maternal Healthcare Services, IFLS 2014

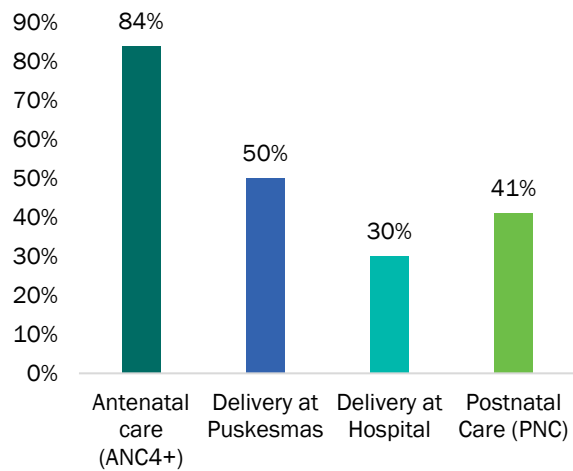
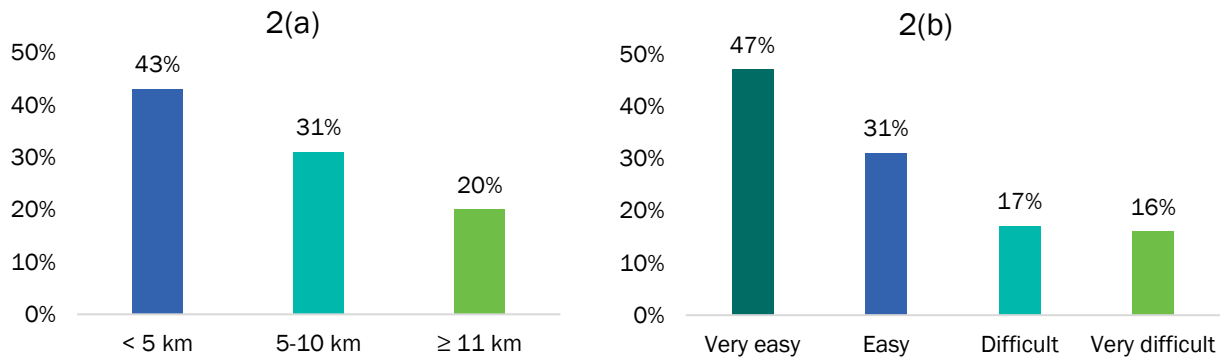
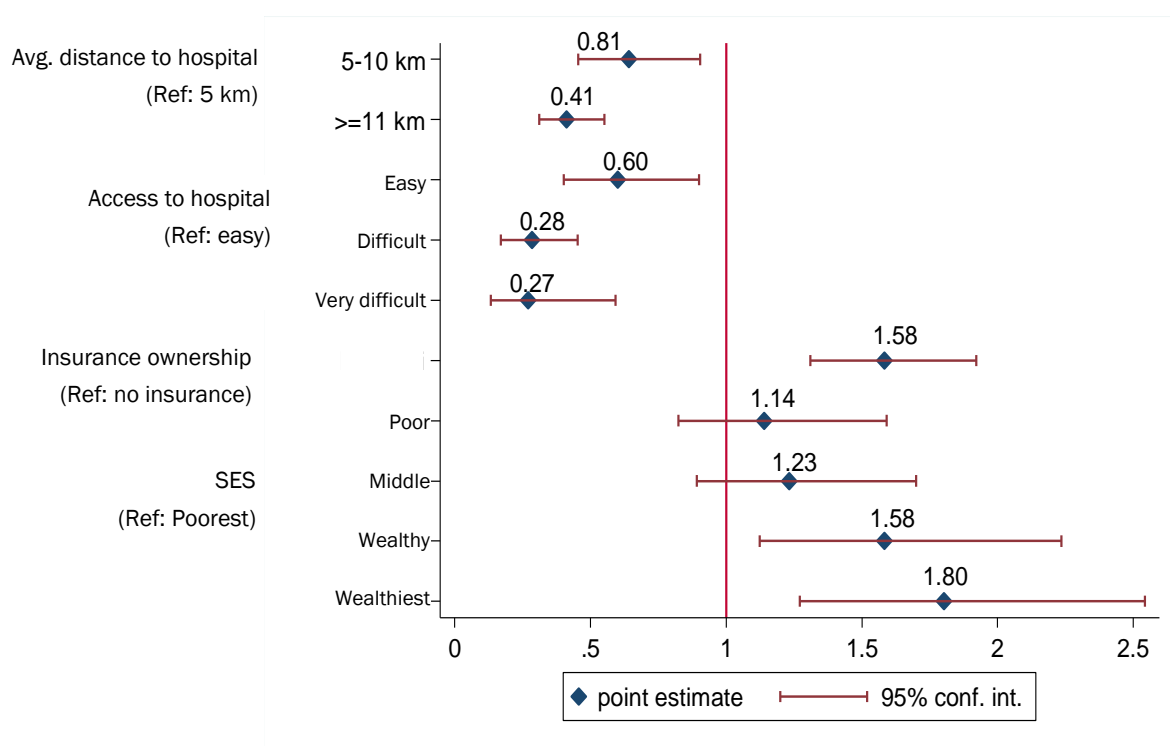


Figure 2. Percentage of Hospital-based Delivery, Categorized by Distance (a) and Access (b) to Hospital



Logistic regression analysis confirmed the influence of several barriers on utilization of maternal healthcare (Figure 3). Distance to a hospital was significantly associated with the likelihood of giving birth at a hospital. A woman who lived more than 10 km away from a hospital was 2.4 times less likely to deliver at a hospital than a woman who lived less than 5 km away. Access to a hospital significantly affected birth attendance at a hospital and *puskesmas*. A woman whose access to a hospital was very difficult was 3.7 times less likely to deliver at a hospital compared to a woman with very easy access to a hospital.

Figure 3. Logistic Regression Results on Barriers to Hospital-based Delivery



Health insurance ownership significantly increased the chance a woman would deliver at a hospital but did not increase the odds of using ANC, PNC, or delivering at a *puskesmas* (Table 2). A woman from the highest SES quintile was most likely to utilize healthcare and was 1.8 times more likely to deliver at a hospital than a woman from the poorest quintile. High SES was also significantly associated with increased likelihood of utilizing ANC, PNC, and birth attendance at a *puskesmas*.

Table 2. Logistic Regression Results on Barriers to ANC and PNC Utilization

Variables	ANC (4+)		PNC	
	OR ^Ω	[95% CI]	OR ^Ω	[95% CI]
Average distance to <i>puskesmas</i>				
<2 km (ref.)	1.00		1.00	
2–5 km	0.92	[0.74–1.13]	1.12	[0.95–1.32]
≥6 km	0.86	[0.66–1.11]	1.21*	[0.99–1.48]
Access to <i>puskesmas</i>				
Very easy (ref.)	1.00		1.00	
Easy	0.99	[0.81–1.22]	0.94	[0.80–1.10]
Difficult	1.39	[0.65–2.98]	0.77	[0.44–1.33]
Very difficult	0.21*	[0.04–1.12]	0.82	[0.14–4.61]

Variables	ANC (4+)		PNC	
	OR ^Ω	[95% CI]	OR ^Ω	[95% CI]
Health insurance ownership				
No insurance (ref.)	1.00		1.00	
Has insurance	1.03	[0.87–1.21]	1.05	[0.93–1.18]
Socioeconomic Status				
Poorest [Q1] (ref.)	1.00		1.00	
Poor [Q2]	1.08	[0.84–1.40]	1.14	[0.92–1.41]
Middle [Q3]	1.22	[0.94–1.58]	1.30**	[1.05–1.60]
Wealthy [Q4]	1.21	[0.93–1.58]	1.23*	[0.99–1.53]
Wealthiest [Q5]	1.69***	[1.26–2.27]	1.44***	[1.16–1.80]

^ΩControls for the regression model are employment, education, age at delivery, residence, and region.

95% CI: 95% confidence interval; *denotes p-value<0.1; ** denotes p-value<0.05; *** denotes p-value<0.01

Discussion and Policy Recommendations

The study shows that several barriers influence maternal healthcare utilization. As distance to a health facility increased, the likelihood of facility-based delivery, either in a hospital or *puskesmas*, decreased. Difficult access to a health facility also resulted in lower maternal healthcare utilization because great distance and difficult access translated to longer time to reach the facility and typically required greater effort and higher cost of transport to reach adequate care.

A 2015 review⁷ reported that transportation challenges in the island regions in Indonesia limited pregnant women’s access to healthcare because they (plus an accompanying family member) required air or sea transportation that is costly and not covered by the maternity insurance (*Jampersal*) or local government’s health insurance program (*Jamkesmas/Jamkesda*). A solution is needed to have the current JKN health insurance program cover such transport costs.

The same study also indicated that women of higher SES and enrolled in health insurance were more likely to utilize maternal healthcare, whereas women with lower SES were generally unable to afford healthcare. Financial constraints remain a barrier in adequate maternal healthcare utilization in Indonesia, primarily among those in the lowest socioeconomic quintile. Since JKN began, the MOH has initiated a new *Jampersal* scheme that covers maternal and neonatal healthcare for poor households not enrolled in JKN, as well as the transport cost to a health facility to obtain ANC and skilled birth attendance. This policy aims to increase maternal healthcare access; however, information on its impact is still limited. The MOH Directorate of Family Health also states that *Jampersal* execution in the third quarter of 2018 was only 27.5%, which suggests more adequate implementation is needed.

Given our study results and the remaining challenges in maternal healthcare access in Indonesia, our policy recommendations are as follows:

1. The MOH should increase the participation of pregnant women in health insurance and optimize utilization of *Jampersal* to cover transportation costs to a health facility.
2. To overcome distance and other barriers to accessing maternal healthcare, primary health providers should provide more home care services, particularly for ANC and PNC. Telemedicine service that specifically focuses on maternal health may also be optimized, particularly for women in remote areas who have limited access to a health facility. Referral health facilities could use telemedicine approaches to improve their assistance to *puskesmas*.

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