Health Financing Meets Maternal Health: Assessing the Impact of Jamkesmas on Skilled Birth Attendance in Indonesia

Introduction

This policy note assesses whether or not health financing reforms such as Jamkesmas have had an impact on key maternal health indicators such as skilled birth attendance in Indonesia. The introduction of Jamkesmas should – at least in principle – have helped remove some of the financial barriers to accessing health care. There is evidence that Jamkesmas has stimulated general outpatient and inpatient utilization rates and provided some degree of financial protection for the poor and near-poor. This also appears to hold true if one looks at the sub-sample of women of reproductive age. However, our analysis suggests that – unlike the case for general outpatient and inpatient utilization rates – Jamkesmas insurance coverage appears not to be associated with higher skilled birth attendance rates. Poor access to information, negative perceptions of quality of care, and low urbanization rates of Jamkesmas beneficiaries could all be contributory factors explaining this result. Skilled birth attendance is a function not only of demand-side factors but also of supply-side factors such as physical proximity of public and contracted private facilities and the capacity of existing facilities. Other demand-side factors such as transportation costs and informal payments could imply high out-of-pocket (OOP) expenditures despite Jamkesmas coverage, which may contribute to lowering the demand for maternal health services.

An ongoing qualitative study is further exploring the reasons for the low levels of skilled birth attendance among Jamkesmas beneficiaries. The results of the qualitative analysis are expected in early 2011.
Increasing skilled birth attendance is generally associated with declining maternal mortality as well as lower neonatal mortality, so increasing uptake of such services and improving their quality is key.3,5

This policy notes assesses whether or not health financing reforms such as Jamkesmas have had an impact on key MH indicators such as the skilled birth attendance in Indonesia. The introduction of Jamkesmas should – at least in principle – have helped remove some of the financial barriers to accessing health care. There is evidence that Jamkesmas has stimulated general outpatient and inpatient utilization rates and provided some degree of financial protection for the poor and near-poor.6 However, whether or not Jamkesmas has had a similarly positive effect on utilization of MH services such as skilled birth attendance has not, to our knowledge, been systematically investigated. Given that the Jamkesmas basic benefit package includes family planning, antenatal care, care for normal and complicated deliveries, as well as postnatal care, an increase in the utilization of MH services such as skilled birth attendance ought to be expected as a result of Jamkesmas enrollment. The note reports on results based on a preliminary analysis of Jamkesmas coverage and skilled birth attendance using the SUSENAS 2009 household survey data.

The remainder of the policy note is organized as follows. Section II provides some background on the Jamkesmas program as it pertains to MH. Section III provides some information on skilled birth attendance in Indonesia. Section IV presents results from the analysis of SUSENAS 2009 household survey data. Section V concludes with a brief discussion.

**Background**

Indonesia has made a commitment to attaining universal insurance coverage for its population. The Jamkesmas program—an extension of a preceding scheme (Askeskin) which provided free health care for the poor—is a key first step towards the goal of universal coverage. Jamkesmas is a central government-financed scheme which provides beneficiaries (targeted at roughly the bottom three economic deciles of the population) with a comprehensive package of health benefits. Of those enrolled in Jamkesmas, 66% live in rural areas (compared with 27% for other insurance programs and 54% for those without any insurance). Despite some evidence of mis-targeting and leakage, the program does appear to have helped improve equalize the overall distribution of access to health insurance across the population.7

One of the key objectives of Jamkesmas is to provide low-income beneficiaries with financial protection from the costs associated with seeking health care. Members are entitled to a wide range of services as part of the basic benefit package, without the requirement of insurance contributions and cost-sharing. The scheme pays for primary care services by capitation, reimburses inpatient services at primary health care facilities on a fee-for-service basis, and has recently started using a diagnostic-related group (DRG) provider payment mechanism for hospital inpatient care.

The Jamkesmas benefit package is considered more generous and inclusive than that of other social insurance schemes, including those of the contributory civil servants health insurance program (Askes) and the program covering formal sector employees (Jamsostek). Indeed, under Jamkesmas, all household members are covered, a comprehensive range of conditions are included, and – at least on paper – there are no benefit ceilings. In reality, however, supply-side constraints – such as lack of availability of specialized services and equipment outside of major urban centers such as Jakarta – continue to be a key constraint.

A range of MH services—including skilled birth attendance—are included in the Jamkesmas basic benefit package. More specifically, at the primary level of care, Jamkesmas covers an unlimited number of pre-natal visits, both in a puskesmas (community health center) and its network or during outreach activities.8,9 The benefit package reimburses for normal deliveries at home and in facilities, deliveries with complications at health centers equipped with basic emergency obstetric services, transportation for referral to the hospital, and post-natal care.10 Blood transfusions are also covered in the benefit package, as in the case of delivery complications.11 At the secondary level and above, the basic package covers delivery with complications and post-natal care, in accordance with the DRG fee schedule. At this level of care, only network providers are covered, with outside-of-network providers being covered only in emergency cases. The health centers are paid on a capitation basis that includes all services. Payments for maternal services are taken from the overall capitation payments that puskesmas receive and the fee schedule
is determined at the local level. The guidelines do not mention deliveries conducted at private facilities or by private midwives (usually involved in home deliveries), but in practice private deliveries are covered under the program.

**Skilled Birth Attendance in Indonesia**

The World Health Organization (WHO) defines a skilled attendant as an accredited health professional – such as a midwife, doctor, or nurse – who has been educated and trained to proficiency in the skills needed to manage normal pregnancies, childbirth and the immediate postnatal period, as well as in the identification, management and referral of complications in women and newborns. Traditional birth attendants, who are typically not formally trained, do not meet the definition of skilled birth attendants. Nevertheless, the types of health workers that fall into the “skilled” category can (and do) vary widely across countries. Skilled birth attendance rates are important as they are typically inversely correlated with maternal mortality rates (Figure 1) and are associated with lower neonatal mortality rates.

![Figure 1. Maternal mortality ratio versus skilled birth attendance, 2008](image)

*Source: WDI
Note: y-scale is logged; skilled birth attendance rates are average for 2000-2008*

Indonesia has had a long history of maternal health initiatives, focused in particular on increasing the percentage of deliveries attended by skilled providers. In 1989, it embraced the concept of Safe Motherhood through the implementation of the “Village Midwife” (Bidan di Desa) program. The scheme was designed to train and place one midwife in every village. By 1996, more than 50,000 village midwives had been placed in villages around the country – a number which has recently grown to 80,000. Figure 2 below illustrates the scale-up of skilled birth attendance since 1987.

![Figure 2. Skilled Birth Attendance Rates, 1987-2007](image)

*Source: Indonesia Demographic and Health Surveys 1987-2007

Despite these achievements, the figures for skilled birth attendance have fallen short of the original targets and – despite incentives to increase the uptake of skilled delivery services – women of reproductive age continue in large numbers to deliver with assistance from traditional birth attendants. Figure 3 below illustrates trends in delivery type throughout the years.

![Figure 3. Birth Assisted by Midwives versus TBA, 1987-2007](image)

*Source: Indonesia Demographic and Health Surveys 1987-2007*

The high variability in the continuum of care in Indonesia is also interesting. On the one hand, there is almost universal coverage for antenatal care. According to the 2007 Demographic and Health Survey, 93% of women received antenatal care from a trained provider for their last birth in the five years preceding the survey. On the other hand, rates quickly begin to decline for delivery with a skilled provider and drop further for postnatal care within the two days after delivery. Among the poorest quintile, almost
an equal percentage of women did and did not use a service provider for delivery, although both groups received antenatal care. Any analysis dealing with skilled birth attendance should look to shed light on the mechanisms and incentives that govern behavior during this key phase, between antenatal care and delivery.

**Jamkesmas and Skilled Birth Attendance: Analysis of SUSENAS 2009 Data**

Analysis of the SUSENAS 2009 household survey data indicates that, in general, women of reproductive age in Indonesia had outpatient utilization rates of about 41.4%, of which 40.7% occurred at public facilities (Table 1). These outpatient utilization rates were lower than those of women in younger (0-14 years) and older (50+ years) age groups. By way of contrast, women aged 15-49 years in the bottom three economic deciles had relatively lower outpatient utilization rates (36.2%) compared with the national average, with a greater proportion of these occurring at public facilities (53.8%) (Table 1). A similar pattern was observed for inpatient utilization rates: about 2.9% of women of reproductive age utilized inpatient services, with 48.2% of these occurring at public facilities. In contrast, women in the bottom three economic deciles had lower inpatient utilization rates (1.7%), with a higher proportion (57.3%) occurring at public facilities (Table 1).

As mentioned earlier, there is evidence that Jamkesmas has stimulated both outpatient and inpatient utilization rates in Indonesia. This also appears to hold true if one looks at the sub-sample of women of reproductive age. As shown in Figure 4, outpatient as well inpatient rates were higher among women aged

### Table 1. Outpatient and inpatient utilization rates for women in Indonesia

<table>
<thead>
<tr>
<th></th>
<th>National</th>
<th>Bottom Three Deciles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outpatient utilization rate</td>
<td>Proportion of outpatient utilization in public facilities</td>
</tr>
<tr>
<td>0-14</td>
<td>50.0</td>
<td>42.6</td>
</tr>
<tr>
<td><strong>15-49</strong></td>
<td>41.4</td>
<td>40.7</td>
</tr>
<tr>
<td>50+</td>
<td>47.4</td>
<td>40.3</td>
</tr>
<tr>
<td>All Women</td>
<td>45.4</td>
<td>41.2</td>
</tr>
</tbody>
</table>

Source: SUSENAS 2009

### Figure 4. Outpatient and inpatient utilization rates in women of reproductive age, by insurance status, 2009

Source: SUSENAS 2009
15-49 with Jamkesmas, both in the general population and especially so among those women aged 15-49 in the bottom three economic deciles.

Estimates from SUSENAS 2009 indicate that the skilled birth attendance rate – for live children born in the previous year – is 80.4% in Indonesia (this is similar in magnitude to numbers compiled from other sources). Not surprisingly, the skilled attendance rates decline as one looks at older children living in the household: the rate for children two years and younger was 79.5%, and for those five years and younger was 77.4% (Table 2).

Table 2. Skilled birth attendance rates for live children, 2009

<table>
<thead>
<tr>
<th>Sample of children aged</th>
<th>Skilled birth attendance rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year and below</td>
<td>80.4%</td>
</tr>
<tr>
<td>2 years and below</td>
<td>79.5%</td>
</tr>
<tr>
<td>3 years and below</td>
<td>78.6%</td>
</tr>
<tr>
<td>4 years and below</td>
<td>77.7%</td>
</tr>
<tr>
<td>5 years and below</td>
<td>77.4%</td>
</tr>
</tbody>
</table>

Source: SUSENAS 2009

There are significant variations across the country in skilled birth attendance: in the year prior to the survey, live children born in rural households had skilled birth attendance rates of only 70.4% whereas the corresponding number for those living in urban areas was 91.4%. There is also a very clear economic gradient in skilled birth attendance rates, with those women in lower economic deciles having rates far lower than those in the upper economic deciles (Figure 5). The average skilled birth attendance rates for children born in households in the bottom three deciles was about 70.4%. By way of contrast, skilled birth attendance rates for children born in households in the upper three economic deciles was about 92.7%, more than 20% points higher.

Figure 5. Skilled birth attendance rates by economic decile and type of residence, 2009

Source: SUSENAS 2009

Discussion

Unlike the case for general outpatient and inpatient utilization rates, analysis of SUSENAS 2009 indicates that Jamkesmas insurance coverage appears not to be associated with higher skilled birth attendance rates. As shown in Table 3, children from Jamkesmas households had an average skilled birth attendance rate of 71.3%, lower than the rate for those without insurance (80.3%) and compared with those that had other forms of insurance (94.3%). This pattern was evident even among households in the bottom three economic deciles: Jamkesmas households had a skilled birth attendance rate of about 67.4% compared to 71.3% among those without any insurance and 83.7% among those that had other forms of insurance. As
Table 3 shows, this same pattern is evident in data from 2004-2008, even before Jamkesmas (with the Askeskin program, and with the health card for the poor, both predecessors of Jamkesmas).

It is rather puzzling that SUSENAS 2009 indicates that Jamkesmas coverage has not been associated with a positive impact on skilled birth attendance rates, especially since the Jamkesmas benefit package includes financial coverage for skilled birth attendance and given the evidence that general outpatient and inpatient utilization rates have increased among women of reproductive health age with Jamkesmas coverage. Poor access to information, negative perceptions of quality of care, and low urbanization rates of Jamkesmas beneficiaries could all be contributory factors. Skilled birth attendance is a function not only of demand-side factors but also of supply-side factors such as physical proximity of public and contracted private facilities and the capacity of existing facilities (including the availability of third class beds, appropriate equipment, etc.). Other demand-side factors such as transportation costs and informal payments could imply high out-of-pocket (OOP) expenditures despite Jamkesmas coverage. For example, companion analysis of SUSENAS 2009 data has shown that beneficiaries with at least one inpatient visit in the previous year incurred OOP expenditures equivalent to 9.22% of total consumption expenditures: this was only 4% lower compared to those with other forms of insurance (but almost 20% lower than to those without insurance).23

In light of the fact that the benefit package offered by Jamkesmas covers a range of services, it could be suggested that if women’s skilled birth attendance were to increase as a result of such coverage, then the uptake of other services, including facility-based deliveries could also increase. A qualitative analysis conducted in West Java suggests that there are a variety of reasons why some women continue to prefer TBAs to skilled birth attendance, and this could help shed light on why Jamkesmas coverage has not stimulated skilled birth attendance.24 Interestingly, some women, especially the poorest, despite going to a skilled midwife for antenatal care, went to a dukun, or traditional birth attendant for delivery. The study reports perceptions among pregnant mothers that TBAs are well-known, trusted, and respected figures in the community, consulted by generations of family members. Trained midwives were perceived as being younger, less experienced, and unfamiliar. In rural areas, TBAs also tend to be more accessible, such that there are as many as 10 TBAs for one midwife in some communities.25 Notably, some families have also reported some discomfort at accessing the services of midwives without “rewarding” them through payment for their services (which is rendered unnecessary because covered by Jamkesmas). The possibility of remunerating TBAs according to one family’s ability to pay, in installments and at generally lower rates than for private midwives, was also viewed by many of the interviewees as favorable. By contrast, on the provider side, midwives may face few incentives to ensure that they assist as many deliveries as possible. Their reimbursement for transportation (a little over US$1) decreases their willingness to make themselves available and travel to remote villages.26 Many of them do not accept insurance while others do not receive any reimbursement for the time they spend assisting deliveries that ultimately take place in hospital. Regrettably, the available SUSENAS data does not allow us to discuss these potential explanations, so further analyses will be necessary in the future.
References


Statistics Indonesia (Badan Pusat Statistik—BPS) and Macro International (2008), Indonesia Demographic and Health Survey 2007, Calverton, Maryland, USA: BPS and Macro International.


World Bank (2010), ’…And Then She Died’: Indonesia Maternal Health Assessment,” Jakarta: World Bank.

This discussion note was prepared by members of the World Bank Indonesia health team: Ilaria Regondi, Ajay Tandon, Eko Pambudi, Pandu Harimurti, Puti Marzoeki, and Claudia Rokx. The analysis presented herein is preliminary and for comment.


It is important to note that although improving skilled birth attendance rates is a key component of efforts to decrease maternal mortality, facility-based deliveries are equally, if not more important, in this respect. Regrettably, the SUSENAS questionnaire does not specifically ask respondents about facility-based deliveries, so for the purposes of this policy note, an analysis of such data could not be performed but deserves the attention of future enquiries into this subject.


Bredenkamp et al (2010).

A puskesmas network comprises the puskesmas outpatient clinic and, in some cases, inpatient facilities, auxiliary puskesmas, village midwife posts, and village health posts.

Activities covered include examination, consultation and simple laboratory examination (e.g. urine check for protein, anemia, iron tablets, and immunization).


World Bank (2010).


In low- and middle-income countries, most data on skilled birth attendance are obtained through surveys, thus reflecting what women report about the person who attended the birth.

World Bank (2010).

World Bank (2010).

Defined as females between 15-49 years of age.

World Bank (2010).

Outpatient utilization rates refer to the period of 30 days prior to the survey date and were calculated only for those women who reported sick during this period.

Inpatient utilization rates refer to the period of 1 year prior to the survey date and were calculated for all women of reproductive age in the population.

Bredenkamp et al (2010).

It is important to note that the skilled birth attendance rates in the analysis are reported for live children only. These numbers are likely to be biased upwards to the extent that those infants who died – and, hence, were not included in the survey, were less likely to have had their births attended by a skilled professional.

Bredenkamp et al (2010).


Ibid.

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